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T R A V E L S

THROUGH

VARIOUS PROVINCES

The Kingdom of Naples,

IN 1789.

BY CHARLES ULYSSES,

OF

SAARBRÜCK SCHLINS.

TRANSLATED FROM THE GERMAN,

BY ANTHONY AUFRERE, ESQ.

ILLUSTRATED WITH ENGRAVINGS.

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TRANSLATOR'S PREFACE.

I HOPE that this translation will be found a copious and useful supplement to Mr. Swinburne's excellent account of his Travels in the Two Sicilies; and that the observations of Abbe Fortis, and M. de Salis's ample description of the Lake of Celano, and of the Claudian Emisario, will render it additionally acceptable to the public. I trust that an avowal of my total ignorance of natural history will be accepted as an excuse for such errors as may be found in my translation, relative to that branch of science; for, although I have used great diligence, in order, as much as possible, to remedy the defect, I am conscious that the naturalist will find much to censure and amend, particularly in the article of conchology. Besides that difficulty, I have had to contend with a variety
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of provincial expressions, peculiar to Switzerland, and with a multitude of errata, as well in the text of the original, as in the different quotations; for, although the Author has noticed upwards of one hundred and thirty errors of the press, the book has been so carelessly corrected, that I am confident I could enumerate two hundred more. But I hope that this circumstance, and the pains I have taken to render the translation as correct as possible, will in some measure entitle it to the indulgence of the public.

Neuchâtel, near Gnef, 1795.

February, 1795.

Note. The map of the Two Sicilies, annexed to Mr. Swinburne's Tour, may be consulted with advantage by the reader of the following pages.

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TRAVELS

TO

NAPLES.

SECTION I.

From NAPLES to MOLFETTA.

ACCOMPANIED by the worthy Archbishop of Taranto, of the family of Capece-Latro, and by the celebrated naturalist, Abbé Fortis, I left Naples upon the twenty-sixth of March, 1789, and followed the Apulian road, which leads directly towards the north-east, across the Terra di Lavoro into the Apennines. During fifteen miles we traversed the level and uniform, but extremely

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tremely fruitful Campagna felice, which is perhaps the most populous, best cultivated, and most productive tract of land in Europe.

According to the latest and most accurate computations, the kingdom of Naples, properly so called, and in which the island of Sicily is never comprehended, contains 4,800,000 souls; and its surface is reckoned 30,000 Neapolitan square miles; so that every square mile contains 160 inhabitants. But the Terra di Lavoro, in which are 1378 square miles, contains 1,210,989 souls; so that including the population of Naples, which is calculated at 400,000, there are 878 inhabitants to every square mile*. But in the greatest part of this province there is not a foot of land which is not in the highest state of cultivation†.

* A Neapolitan mile contains 7000 palms, equal to 1091 French toises, or 2182 English yards.

† *Ille tibi læta intexit vicibus unus,*

Ille famæ olæ est; experiere colendo.

Et facilem pecori, et patientem vomeris unci.

Talem dives arat Capiti, et vicinis Verulo.

On jago, et vacas Clisina hoc loquitur Accoris.

VING. Georg. lib. ii. v. 221.

By

By the road side, and near the houses, we saw a great abundance of mulberry and other fruit trees, and the corn was often diversified with flax and hemp, and especially with a sort of red clover, here called *prata*, and in some places *sella*, which is sown at Christmas, is twice cut, and is ploughed under at the end of May, for the purpose of sowing Turkish corn. This well cultivated country is also peculiarly productive; for a *moggia** of land usually produces fifteen fold, exclusive of the vines and fruit-trees. Much more is indeed produced in the neighbourhood of Vesuvius, where a *moggia* costs a thousand ducats† (£ 187. 10s.), and annually brings in from 60 to 100 ducats—(from £ 11. 5s. to £ 18. 15s.) after paying all expences. This fertility is principally to be ascribed to the volcanic soil which composes nearly the whole Campagna felice, whose origin seems entirely owing to

* A *moggia* contains 35,731 feet; and five *moggia* are equal to four English acres.

† A Neapolitan ducat is equal to 37. 9d, sterling, according to the exchange at par.

TRAVELS TO NAPLES.

the ignivomous mountains. It appears indeed that as well those in the district of Pozzuoli, as Vesuvius in particular, must formerly have been much larger than at present; for there is no other method of accounting for the streams of lava at Cisterna and Cimitile, places that are situated in a direct line with Vesuvius and Somma, and are now so covered and protected by the Somma from the eruptions of Vesuvius, as to be in no degree exposed to such streams of lava as we find there, and which for a very long period have been broken into by the inhabitants of those towns for the purposes of building. We may therefore boldly conclude, with Sir William Hamilton, that Somma and Vesuvius once formed one great volcano, whose evacuations have produced the circumjacent plain. Thus were the Phlegræan fields raised out of the sea by a volcano, not far from the Camaldoli and the lake Agnano.

At Cimitile, twelve miles from Naples, we began to see door and window cases of limestone,

stone, which is brought from the neighbouring Apennines, and is used in the construction of the houses in most of the other villages. Beyond Cimitile, and in the neighbourhood of Avella, commence the plantations of nut bushes, which continue beyond Avellina.

Near Cardinale, fifteen miles from the metropolis, we reached the foot of the Apennines, precisely where a branch of the principal mass, advancing towards the south, joins the sea at Castellamare, and stretching forward to the Cape of Campanella, forms the beautiful coast of Sorrento, or the south-east boundary of the magnificent bay of Naples, whilst the grand chain continues its course towards the south-east.

A continued ascent conducted us up a narrow valley, chiefly planted with vines below and hazel bushes in the middle, and shaded at the top by chestnut trees, which crown the summits of the surrounding hills. As the chestnut-trees are mostly of the wild sort, their fruit is given to the swine; but the chief profit arises from

the wood, which is wrought into staves for casks. I saw abundance of cherry-trees by the way-side; and the cytisus with its pendant yellow flowers, nodded to and fro. This valley is singularly circumstanced with respect to its strata; at its entrance, in a ravine, over which is a bridge, limestone of the hardest quality forms the lowest, rapillo the next, and greyish red tufa, the upper stratum. Farther on, rapillo is seen on each side of the road, then the volcanic tufa, of all colours, and where the eye can pierce deep enough, the limestone beneath it. But this limestone frequently appears in great banks, in the midst of these volcanic productions, and projects beyond them; and I might almost say that after the waters had hollowed out the vallies in the calcareous mass, either Vesuvius in its original height, or some other volcano arisen in this country, had again filled them with rapillo and tufa, which all lay in perpendicular strata, until they in their turn were hollowed out by the waters down to the limestone. Such revolutions seem indeed very contradictory

contradictory to our received chronology; and in fact many of observers of the volcanoes, in Sicily and Italy, have positively declared it to be ill-founded. But before the final decision of this important question, I wish to know what accounts we have, and might procure of the various revolutions of nature during the last 2000 years; how far we may, from what is known to us, draw conclusions as to what lies hidden from us, and finally, whether in the first period of our globe's existence, we should not attribute to it very different powers, a greater scope for the operation of those powers, and consequently greater changes than we at present discover. In my opinion this point has been by no means placed in its proper light, or sufficiently discussed.

The ascent terminates at Monte Forte, a considerable village, beyond which, as well as in the before-mentioned valley, we remarked several low huts of a semicircular form, built of stone, and covered with tiles. They are erected for the purpose of preserving the snow,

which is afterwards sold in the Campagna felice. A very steep ascent leads from Monte Forte into a large basin, which composes the principality of Avellina; and it would be difficult to find a spot of ground more beautiful than this crater. Well wooded hills surround this charming garden, which is watered by a murmuring stream, and thickly planted with hazel bushes, and all sorts of fruit-trees, intermixed with vines entwined around the poplar, whilst the soil is embellished with every variety of grain. The produce of the hazel is with reason called "*Nux Avellana*," for the district of the town of Avellina certainly plants more nut-bushes than any country whatever. This tree is planted in rows, in the best soil, and fifteen feet asunder; and the branches are drawn up as straight as possible, so as to form large bushes, of many stems. In March the earth is stirred around the roots, and manured; but in April the ground is ploughed up between the bushes, and sown with corn; and these fields are always kept remarkably clean. It is said that

that the trade in nuts, which are sold either fresh or dried, annually produces 60,000 ducats — (£11,250.) — to the town of Avellina. Great quantities of these nuts, dried and strung like a paternoster, are sold at the feast of the Madonna dell' Arco, which is celebrated in the summer, a few miles from Naples. It is very singular that the culture of this fruit should have so long continued peculiar to the same place. Pliny says that it came originally from Greece, but received its appellation from Avellina; and that it was then also the custom to dry them. Palladius, in his *Re Rusticâ*, says, that the nut-bushes love a moist soil; and this agrees with that of Avellina better than the assurance of Columella, that they delight in a dry one *.

* *Ceteris quidquid est, solidum est, ut in Avellina, et ipso nucum genere, quas antea Abbellinas patrio nomine vocabant. In Asiam Græciamque è ponto venere, et ideo ponticæ nuces vocantur. Et et torrentur.*

PLIN. *Hist. Nat.* lib. xv. c. 32. Ed. Lugd. Batav. 1669, 8vo.

Agrum durum, callidum, siccam desiderat.

COLUMELLA, l. vi. c. 8. 1. 2.

Gaudent loco macro, humido, frigido, et sabuloso.

PALLADIUS *Fels.*

The

The manufactures and other curiosities of this town and neighbourhood have been so amply described by Swinburne, that I allow myself to pass over them in silence; but I cannot help contradicting his assertion, "that the women wash their hair once a week with a lye of wood-ashes, that changes it from a dark-brown colour to a flaxen yellow, of many different tints." This is certainly not true, for they wash themselves, as in most other parts of Italy, with pure water; and the lye would, in my opinion, be prejudicial both to the head, and to the hair.

Avellina owes its fertility to the volcanic soil, of which its whole territory consists. It is hardly possible that this should proceed from Vesuvius; and as the Amfanti Vallies are not far distant, and at this day exhale very powerful mephitic vapours, it is highly probable that these environs were covered with the evacuated contents of a volcano, which once existed there.

Upon the twenty-seventh we continued our route to Ariano, twenty-six miles from Avellina.

lina. With the district of the last mentioned town terminates the fertility of the soil; or at least the careful cultivation of it very evidently diminishes. The tufa continued about six miles, as far as Pratola, when it wholly disappeared, and the road became covered with the finest pebbles.

Near Pratola a steep descent conducted us into a valley, bounded on each side by moderate hills of pudding-stone, under which I discovered the hard calcareous rock. How the former came there I am at a loss to determine; for in that part of the Apennines are no very high mountains, no long and deep vallies, and no spacious lakes, to occasion such an assemblage by the sudden swelling of a torrent, or the rapid and violent overflowing of a lake; and yet these masses could not have existed without a considerable inundation.

Pratola, Serra, Mirabella, Grotta Minarda, and Dente Cane, offer nothing remarkable, save the breed of white swine at the last-mentioned place; a rarity in the kingdom of Naples,

Naples, where the swine are universally black, and are therefore never called "Porci," but *Animali neri*.

Except a few vineyards near Grotta Minarda, where the vines no longer twine round the trees, but are fastened to low stakes, the whole country is one continued corn-field.

Ariano is situated upon the uneven summit of a lofty mountain, which appears to belong to the highest crest of the Apennines. This hill consists of a calcareous sort of tufa, full of marine bodies, wholly bruised to pieces, in very oblique strata, inclining to the west.

Although some traces of volcanos are discoverable in the vicinity of Ariano, I am still far from agreeing with another traveller, that these marine exuviae have been pumped out of the sea by a volcanic eruption, without the intervention of a deluge. It is true that nearly throughout the whole chain of the Apennines, by which Italy is divided, we meet with volcanos, which in part still remain visible, and in part have left behind them, as proofs of their existence,

existence, the materials which they ejected. On the other side of Ariano, about thirty miles from it, but in the same chain, lies the mountain Voltore, the last extinguished volcano that is known amongst the Apennines, which afterwards stretch through the two Calabrias, and frequently change their calcareous nature into a sort of granite. But whoever considers the enormous quantity of petrified and fossil shells which are sometimes found in heaps, and sometimes in regular layers, in various parts of this mountainous tract, must confess, first, that the volcanos are too few to have raised all those shells out of the sea, and secondly, that a forcible explosion could never form such regular strata. If we farther remark, that the hard limestone generally composes the basis of the volcanos themselves, it will not be denied that the waters at first covered the calcareous mountains of Italy, and that the volcanos still visible amongst them, were produced at subsequent periods, and perhaps when Vesuvius and the volcanos in the Phlegrean Fields were

were raised out of the sea. We must therefore have recourse to some great inundation, in order to account for the vast quantity of marine productions found amongst the Apennines.

The situation of Ariano is extremely romantic; for the hill upon which it stands is surrounded by well cultivated vallies, full of vineyards and trees, whilst upwards of a thousand grottos, hollowed out in various parts of the hill, form the habitations of the poor, who find it very easy to dig into the soft tufa, and to form a pent-house. These troglodyte dwellings are very frequent in the southern parts of the kingdom, where the excavations in the extensive ranges of soft tufa, afford a most pleasant asylum against the heats of so sultry a climate. The view from the highest point of Ariano is extremely fine. Towards the north-east the eye penetrates far into the province of Principato Ultra, whose capital, Monte Fuscolo, is some leagues distant from Ariano, and is rendered famous by a mine of fossil charcoal,

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which was discovered by a priest, but which a certain Ranieri found the means of converting to his own advantage. Not far distant appears the city of Benevento, at the foot of a lofty mountain, and at the confluence of two rivers. It is scarcely possible to imagine how the King of Naples can permit such a foreign sovereignty in the centre of his dominions. Without recurring to the irregular methods employed by the Holy See to acquire it (and which are now brought to light by that part of the Arabian Codex which contains the letters of the first Norman Princes), the damage done to the crown, partly by the smugglers, and partly by the asylum which it affords to criminals of every description, would be a sufficient motive for seizing Benevento, and its district. Tanucci had already laid his hands upon it; but Spanish intrigue outweighed the welfare of the state, and it was restored. Although the view on the other side of the hill of Ariano is somewhat confined by the Apennines, it is not the less agreeable; for the hilly and irregular tracts, covered

covered with villages and farm-houses, are extremely grateful to the wandering eye.

Having attained its highest point at Ariano, the road first leads across a high open country, and then traverses an uniform, inclined plain, sown with corn, until it reaches the valley of Bovino, which commences between Savignano and Greci. This valley affords great satisfaction to a Swiss, who finds in it the exact miniature resemblance of many parts of his native country. On one side it displays, even to the summit, a range of corn fields, embellished with clumps of trees, and occasionally interrupted by perpendicular and rugged masses of calcareous rock. The other side is at first intermixed with pasture grounds, and fields of corn and hemp; but it afterwards puts on the rich clothing afforded it by the extensive forest of Bovino. This valley is moreover watered by a stream, whose murmurs occasion the greater pleasure, inasmuch as it gives the scenery a degree of chearfulness, in which the greatest part of Italy is deficient. Both the valley and the

the good road terminate near the bridge of Bovino, eighteen miles from Ariano. This road owes its existence entirely to the late king's passion for the chase, which being excellent in the extensive forest of Bovino, he ordered the road to be constructed with royal magnificence, in 1743. It is admirably well made, and abundantly provided with bridges and fountains. The present King has never visited this forest, but has permitted all his subjects to hunt there, and granted a general liberty to clear away the wood, and put as much of the ground into tillage as the husbandman shall think proper. Since this permission, the forest has afforded pasture to all kinds of cattle, and a lurking place to the banditti; and as the road was not made to benefit the subjects, but to gratify the caprice of the sovereign, it began to decay as soon as that purpose was no longer requisite; but by good fortune it was taken into consideration a few years since, and is now in the finest order.

Near the bridge of Bovino, the roads to

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Foggia

Foggia and Barletta divide: we followed the latter, and soon gained the immeasurable plains of Apulia, called Il Tavogliere di Foggia, of which I shall speak at full length in its proper place. I shall content myself with observing here, that from the bridge of Bovino to Ortona, where we arrived upon the evening of the twenty-eighth, we travelled across a tedious plain, twelve miles in length, consisting of very unprofitable pasture land, whose uniformity was occasionally relieved by corn fields, and a few wild and scattered pear-trees. The country for many leagues round Ortona was covered with the *ferula communis* of Linnaeus, here also usually called *ferula*. I was told that it attains the height of twelve feet, and is hurtful to all beasts except asses, for which the branches are gathered as fodder. Hurdles for parking sheep, stools of a cubic form, like a die, and common in this part of the country, chicken coops, bird-cages, and similar articles, are made out of the hollow stems of the *ferula*, which are two inches thick at the bottom.

tom. Under the shade of this plant grows a sort of mushroom which has the taste of fennel, and is in great request. I cannot say with certainty, whether this be the same *ferula* to which Pliny ascribes a variety of medicinal virtues. Its flower indeed bears a great resemblance to that of the aniseed plant, and its stem seems also at that time to have been converted to a variety of uses. Columella advises the placing the hazel nut in the hollow stalk of this plant, and this also argues in favour of our *ferula* being the same as that of the ancients*. The *asphodelus ramosus* appeared in great abundance in this country, and the caper-shrub was alike plentiful.

From Ortona, which formerly belonged to the Jesuits, we travelled upon the twenty-ninth, twelve miles across the Tavogliere to Cerig-

* *Ferula semen simile Anetho habet.*—Eviridi *ferula* ramusculus utilis est ad omnia ea vitia.

PLIN. L. XX. c. 33.

Ibique semen *ferulae* repangito. Cum *ferula* fuerit enata, eam audito, et in medullâ ejus sine putamine nucem grâcam abscondito, et ita adobruito.

COL. L. vi. c. 8.

nola, a considerable market-town belonging to Prince Egmont-Pignatelli, and daily increasing in inhabitants, whose number already amounts to ten thousand. To this place belong no less than 100,000 moggie of arable land. A small quantity of wine is likewise made there, but is not an object of consideration. Its flourishing situation, although partly owing to the junction of the roads from Barletta, Andria, Naples, and Foggia, is principally to be attributed to the exertions which the proprietor has lately made to put his possessions upon the most advantageous footing.

From Cerignola we proceeded twelve miles farther to the commencement of the new road at the bridge across the Ofanto, and in two hours more reached Barletta, near which the tedious plain assumed a more cheerful aspect, and the country was diversified with corn fields, vineyards, and orchards, full of carob (*ceratonia filiqua*) fig, almond, and other trees. The town, situated upon the Adriatic, is large and well built; but although it contains 16,000 inhabitants,

blunts, there is room sufficient for double that number. Notwithstanding it offers nothing remarkable, either to the antiquary, or the naturalist, the very friendly manner in which we were entertained by M. Esperi, and his amiable wife, will always make me remember it with pleasure. Foreigners are apt to travel into this country with the prejudiced idea of finding the inhabitants uncivil and inhospitable, and are therefore the more surprized at meeting with true and unaffected hospitality.

We found the country extremely well cultivated between Barletta and Trani, where we arrived upon the morning of the thirtieth, after a short journey of eight miles. Corn and vines, almond, fig, and other fruit-trees, flourished in the same field. The vines were very low, without stakes, and planted in rows; but between every four vines the earth was heaped up, and sown with corn. This method, which is said to keep the roots always fresh and moist, is generally practised throughout the Puglia Petrosa. This is a tract of land that extends from

Barletta along the sea coast towards Brindisi, and is so called because it chiefly consists of rocks, partially sprinkled with a thin covering of earth. Near Trani I observed a very considerable increase in the cultivation of fig-trees, which are all planted in rows in the fields, and dressed like dwarfs and espaliers; a practice known to the ancients, and by which the trees are rendered more vigorous, and productive of much better fruit*. A very lucrative trade is here carried on in dried figs; but the chief produce of this province, and especially of the interior part of it, consists in almonds. The carob-tree is not so frequent here as in Sicily, but is much better managed; for the crown of the tree is hollowed out like a cup, in order that the fruit may be benefited by the free circulation of air. The profits arising

* Nonnumquam etiam cum frondere ceperunt arbores, cacumina scilicet ferro summa prodest amputare; sic firmiores arbores ac feraciores sunt.

COLUMELLA, l. vi. c. 8.

Recidenda sunt ea quæ patria aut male nata repereris. Ea ratione putanda est ut inclinata per latera possit expandi.

PALLAD. l. iv. c. 10.

from

from the sale of its fruit furnish pin-money for the women. The spiral hovels which abound upon this coast, and have been mentioned by Swinburne, are not a little remarkable, and do honour to the industry of the inhabitants; for after they have picked all the stones off the fields, without suffering even a single one to remain, and after having made the wall round the property, of a sufficient height, instead of heaping up the stones upon a spot of ground which would be thereby rendered useless, they construct a conic tower, which is hollow within, and upon the outside whereof they form a border, or ledge, that winds round the building nearly to the top, and upon which they dry the figs. The inside is used as a repository for their implements of husbandry, and as a place of refuge against the sudden and violent storms, called Tropæa, so frequent in this country. These hovels are here termed *Spechie*.

Trani is a tolerably well-built town, containing about 14,000 inhabitants, but offering nothing worthy observation except the harbour,

which has been lately formed with great magnificence. It now wants nothing but water; the smallest merchant-vessel being scarcely able to anchor at the entrance. It is the fatal practice of this country to embark in very costly but useless enterprizes, whilst practicable works of the first necessity are never once thought of.

From Trani to Bisceglia we travelled four miles along an excellent road, over a very fertile and well-cultivated country, in which the olive-trees began to be more frequent. Near Bisceglia, and the famous bridge della Lama, the soil during a considerable extent, consists of a lively red solar earth. At Bisceglia terminates the new road, which was intended to have been carried through the whole province. Although it is now generally understood that without good roads a country never can attain the degree of perfection of which it is capable, yet are there many districts in which this advantage has been long neglected. The kingdom of Naples belongs to this number; for in
many

many parts thereof it is but lately that the highways have been attended to. They were so circumstanced fifty years since, that a person travelling by land from Otranto to Naples, always made his will, and took a solemn leave of his family and friends. This precaution was rendered necessary by the badness and insecurity of the roads; and he who successfully terminated his journey, was as much renowned in the province as a Columbus, or an Anson. But when the late king ordered the road to be made good, from Naples to the bridge of Bovino, the peril was in a great degree annihilated; the forest of Bovino having been the most dangerous pass for travellers. But they were still so numerous in the Puglia Petrosa, that the communication between that part of the country and the capital was not so open as was wished; when about eight years since it was resolved to make good roads throughout the kingdom. With that view a tax was imposed upon all ranks of people, and destined solely for the construction of the highways. I
pass

pass over the mode of assessment, and the administration of the tax, which have been mentioned by Galanti in his excellent performance. But I cannot omit saying, that although the impost annually produced a very large sum, the construction of the roads was but of very short-lived duration, and that although the two provinces of Otranto and Bari annually contributed 58,774 ducats (£11,020. 12s. 6d.) only twenty-two miles of the road have been as yet completed. It is also to be observed, that this road is scarcely twenty-four feet wide; that a few feet under the surface of the earth it has the hard rock for a foundation, and that the materials for coating it were every where at hand. Thus the roads might have been easily and entirely constructed at the expence of the provinces. To this it is answered, that it was intended first to complete the high road to Reggio, in order to open a secure communication with Sicily; but the money that was collected was sufficient to defray the construction of ten roads to Reggio; nor indeed is that road

road half finished at this moment. To this is to be added, that a high road to Gallipoli is as requisite as one to Reggio; and it appears to me unreasonable that one province should pay for the advantage of another, and should at the same time be injured, when the benefit accruing to the kingdom at large is of equal import; but the real cause of the delay is to be ascribed to the improper manner in which the money is employed. The roads are in general made by contract; and as the King is but little acquainted with his country, he confides in others, who so magnify the difficulties, that terrified at the expence, only a small part is ordered to be constructed. The engineers, on the other hand, endeavour to make as many different contracts as possible, in order to protract the completion, and add to the profits of their engagements. The road itself testifies this, however it may be denied at Naples. In the above-mentioned twenty-two miles of road are more than ten very considerable bridges; as if the Puglia Petrosa resembled the Egyptian

tian

tian Delta; whereas the shallow Ofanto is the only river in the province, and not a drop of water will ever flow under the other bridges, without the assistance of a deluge. On the contrary, they are all thrown across the most valuable property; and the bridge della Lama is above all such a scandalous job as to excite the loud complaints of the province; for a bridge of one arch, nearly high enough for a frigate to pass under in full sail, has been thrown across a small valley, whose bottom was for time immemorial a beautiful orchard. Although the materials were found upon the spot, this bridge cost 15,000 ducats—(£2812.10s.)—as the constructor of the road has confessed (and as others say, much more); whereas the same service would have been rendered by a raised causeway, with a small canal, at the charge of only a 1000 ducats (£187.10s.). I could in some measure excuse this superfluous pomp, had the whole road been made equally superb; but in many parts of it the traveller descends from a stately bridge to a narrow road,

road, hemmed in by a dry wall already in decay. The provinces and towns have long since expressed their wishes that they might be allowed to employ their money in annually completing a part of the road; but all their applications have hitherto been fruitless. But however unpleasant be the roads, the traveller is still more inconvenienced by the inns, which are beyond all idea intolerable. Unhappy he who travels through this country without letters of recommendation; and twice unhappy he who in that case is unprovided with his own provisions, and his bed; for he not only finds nothing to eat in the inn, but must submit to pay very dearly for the pleasure of being half devoured by the nastiest of vermin. For as the privilege of keeping an inn in the banonial towns is disposed of to the highest bidder, the landlord remains without a rival, and chooses the most advantageous mode of exercising his extortion upon the traveller. The royal towns, indeed, furnish more than one inn; but though somewhat better than the others, they are
much

much inferior to the very worst in Germany. But the insecurity of the roads is a still greater inconvenience; for as the goddess Thencis is wholly unknown in this country, he who has the heaviest purse, has always reason on his side; and as a dozen assassinations are only punished with the gallics, the highways abound with robbers, with whom the inn-keepers are generally in confederacy. Thus the traveller, who wishes not to hazard his existence, is constrained to hire an escort, which greatly adds to the charges of his journey. In short, if the interior parts of this kingdom were full of gold mines and precious stones, no better methods could have been devised to prevent the visits of the curious.

From Bisceglia we proceeded to Molfetta, where we arrived at two in the afternoon, having travelled four miles along the old Apulian road, whose badness surpasses all description and belief.

SECTION

SECTION II.

The PULO DI MOLFETTA.

AS the environs of Molfetta afforded one of the most remarkable objects of attention during my journey, I passed the rest of the day, and the following morning, in a visit to the Pulo di Molfetta, or the celebrated mineral saltpetre cavern. It has indeed been described both by Zimmerman, and the Abbé Fortis; but as the truth of the account is much doubted, not only at Naples (through ignorance and malice), but also in Germany, I think it my duty, after two long and narrow examinations of the spot, to add my testimony to that of those intelligent mineralogists. Without stopping to decide the question, as to the existence of mineral saltpetre, I shall proceed in the minutest manner to describe the result of my visits

visits and observations*. The Pulo is a circular cavity, not unlike the crater of a volcano,

* Abbé Fortis in a small treatise, entitled, "*Del Nitro Minerale Memoria Storia-Fisica*," published in 1787, has brought together a variety of proofs that water, earth, and stone may be impregnated with mineral saltpetre. As to water impregnated with natural saltpetre, I shall remark that Berger, superintendant of the saltpetre works in Sweden, gives an account of a water at Helsingör, containing half an ounce of saltpetre in every cantaro—(probably an hundred weight). Glauber, in his "*Prosperitas Germaniae*," says, that at the foot of a hill, upon which stands the castle of Cösel, are springs impregnated with saltpetre; and Dr. Oeder, in his treatise "*De Thauris Badoensibus*," published in 1782, assures, that one of the springs there gives twenty-eight grains of saltpetre in every cantaro. With respect to earth being impregnated with natural saltpetre, I pass over that which abounds in India and America, and especially in Peru, and upon the coast of Patagonia, and shall content myself with mentioning what Bowles says in his introduction to his natural history of Spain—"that in that kingdom the third part of the waste lands, and the dust of the roads, contain so much native saltpetre, that by a very simple operation, as much saltpetre might annually be procured as would enable Spain to supply all Europe with that article." Finally, with regard to stone being charged with saltpetre, we have not only the example of Modena, and parts of the Basilicata, but Glauber, in his above mentioned work, says, that the water containing the saltpetre, received that quality from a lime-stone rock which was, as it were, saturated with saltpetre; and that the Counts of Cösel might draw more profit

1600 palms* in circumference, and about 150 palms deep, in the centre. It is situated a mile and an half north-west of the town; and the brink of the cavity may be reckoned at 200 feet above the level of the sea. The interior of this bowl consists, in its upper half, of a perpendicular wall of hard lime-stone; but the earth and stone having fallen in, the lower part is become a caldron-like excavation, whose sides are in part hidden by the perpendicular wall, and are in part seen through its fissures.

The steep wall consists of lime-stone in horizontal strata, which vary as much in size as the lime-stone does in quality; there being the hardest—*particulis impalpabilibus*—the coarse-grained, and the friable. In these unequal strata are numerous caverns, hollowed out as it were in rows, and varying in height and depth. There are forty which a man may enter in an upright posture; and in some of

profit from that mountain than from their whole husbandry. Wallaseus, in his Mineralogy, speaks likewise of lime-stone in the Ukraine, richly impregnated with sulphur; and doubtless there are many such in Germany, France, and Italy.

* A palm is rather more than ten English inches.

them he may proceed so to a considerable distance. Others soon become less lofty, but stretch so far into the bowels of the earth, that a man may crawl forwards more than an hundred paces; and the smaller holes and excavations are innumerable. It is singular that the mouths of all these cavities should be oval, and that their smaller diameter should follow the direction of the strata. By a close comparison of the small caverns with the large, it appears that the former progressively enlarge, by the peelings of the stone in the oval direction. These excavations give to this singular place the appearance of a ruined stone theatre, of modern times; for as they follow the strata almost in parallel lines, they form as it were a regular succession of five stories. The caverns, of which I visited many, though by no means all (for the two upper tiers are only accessible to birds)*, are thus interiorly distributed. Such

* Abbé Fortis, who afterwards visited the most accessible, by means of ladders and ropes, has assured me that they are all nearly of the same nature, which indeed their outward appearance renders probable.

as admit of penetration by persons in an upright posture more than thirty paces, then gradually diminish in height and breadth, but by smaller passages and apertures, stretch, in various directions, far into the bowels of the earth; and indeed these galleries are so multiplied, and cross each other so frequently, that the explorer might be easily bewildered in this subterraneous labyrinth. These grottos are chiefly composed, even to their farthest extent, of a very hard and compact lime-stone, but sometimes of a calcareous tufa. The stone, when flat, is usually covered with a very fine down, which, when applied to the tongue, has the taste and freshness of saltpetre, and when examined with a microscope, discovers its crystals; but sometimes the stone is covered with a porous crust, under which the native saltpetre is found in crystallizations, the thickness of an inch. This crust is in general very easily removed, being loosened by the pressure of the saltpetre. The small holes, or cavities, are usually full of the finest saltpetre; and where

the walls and roofs of the caverns have corners, or large projecting inequalities, the saltpetre is found in the hollow spaces in large quantities, and in a crystallized state. The farther the grottos are explored, and the more narrowly all the corners are examined, the more successful is the search for saltpetre, which is there found in large pieces, of the most dazzling white—sometimes like down, and sometimes crystallized; and where one stratum of limestone terminates, a small layer of saltpetre constantly intervenes between that and the succeeding stratum. I am almost inclined to think that the saltpetre, contained in the limestone, is the cause of the formation of these caverns; and that by continually exuding out of the stone, it gradually decomposes it, and forces off a succession of crusts. But why the apertures are oval, and, above all, how the saltpetre comes into this lime-stone, are questions which I am by no means prepared to answer. With respect to the copious production of saltpetre, and the method of finding it, all the grottos

grottoes are alike; for I have very thoroughly examined so many, as to leave no doubt about the rest. The largest of all is that called Carolina, which has not been thoroughly explored. It is not only full of saltpetre in masses, and all sorts of forms, but through a chasm upon the left hand, at the entrance, is a stratum of red bolus clay, full of saltpetre, of the same sort as that upon the lime-stone; and beyond it are three cavities, partly filled with the same kind of clay, and partly clothed with a calcareous sort of stalactites. The finest saltpetre is found here; and it is not a little remarkable that cubic sea salt crystallizations are scattered here and there amongst it. This gallery now turns to the right, leaving on one side a small cavity which contains no saltpetre, but a bed of very fine quartz-sand. Not far distant is the entrance into a cavern that appears but a little lower than the Carolina, and in which the saltpetre abounds, either pure or mixed with sel-nites, or between the calcareous spar crystallizations, of which very fine pieces have been

found. This cavern is also full of galleries, too narrow to be explored, but which as far as I could discover with a torch, are full of the finest salt-petre. I have in general remarked that the farther the salt-petre is removed from the immediate effects of the air, light and sun, the finer and more plentiful it is.*

Abbé Fortis with great reason directs the attention of the naturalist to the Grotto Ferdinando, which I attentively examined, and not only found as abundant in salt-petre as the others, but also observed all the circumstances and peculiarities, which he mentions in his description; and it struck me as well as him, that the salt-petre was as fine in a very dry place as elsewhere. From this grotto I obtained pieces of native salt-petre, so thick and so perfectly like milk-quartz, that I was induced to taste it, in order to be certain that it was really not so. The small cavities in this grotto

* Since I left Naples, I have heard from Molfetta, that a piece of salt-petre of two pounds weight, had been found in one of the galleries the most remote from day-light.

are

are also extremely pleasing, on account of the thick selenitic stalactical crust with which they are cloathed; but this coating is loosened by the salt-petre, and gradually pushed off.

Thus far extend my own observations upon the Pulo. I leave others to establish systems as to its origin and formation, and shall only endeavour to lighten their toil, by directing their attention to the three following facts. First, several petrified bodies, such as Sabellites, Archites, Oolithites, and Cochlites, have been found in the solid lime-stone. Secondly, in digging a cistern thirty palms deep, at the bottom of the Pulo, the workmen discovered a running water of a muriatic taste; and thirdly, some stone instruments, like those used in New Zealand, have been found in digging in different parts of this singular spot, and are now in the possession of the Abbé Fortis.

The following are the various sorts of salt-petre which that naturalist observed here.

First, Native salt-petre, thick, of no determi-

mate figure, half transparent, and like quartz, when broken. Very scarce, but I also have seen some of it.

II. Native salt-petre, thickly laminated, resembling the amianthus, and transparent; it is found in the interstices of the rocks, especially in the Carolina and Capovento grottoes.

III. Native salt-petre, finely laminated, friable, of no determinate figure, and whitish; it is found alternately with a crust of lime-stone which detaches itself in flakes.

IV. Native salt-petre, whitish, resembling crape, extremely fine, and easily dispersed with the breath. It is found in the Gravin and St. Leonardo grottoes, spread like sheets of the whitest paper, upon the surface of the lime-stone.

V. Native salt-petre, loose and like dust; it is found under the perpendicular projections of the solid lime-stone, and between the flakes of the foliaceous kind.

VI. Native salt-petre, friable, fungous, and transparent;

transparent; it is found in considerable quantities in the heaps of earth fallen down within and without the cavern.

VII. Native salt-petre, thick, white within, and of no determinate figure; it is found upon the surface of the hard lime-stone.

VIII. Native salt-petre, compact, transparent, resembling quartz, when broken, and without any determinate form; it is frequently found in crystals, upon the surface, and but seldom in the interior of the lime-stone.

IX. Native salt-petre, thick, sanguine, and white within; it is found in the interstices of the small layers of flaky lime-stone, especially in the Ferdinando cavern, whose irregular crevices it generally points out. It sometimes appears upon the surface of the hard lime-stone, in the form of hedge-hog's bristles, and sometimes like hoisted hollow crystals.

X. Native salt-petre, like down, and white; the interior surface of the small grotto, and particularly of those called *Spechie*, is covered with it.

XI. Native

XL. Native salt-petre, in hollow, hoisted, transparent crystals. This is found upon the red bolar fort of clay in the Carolina, which also affords a variety like crape, mixed with much cubic sea salt.

XII. Native salt-petre, white, and compact like stone; it is chiefly found in long neglected holes, whose walls are covered with it; but it is also to be met with in places exposed to the air, as behind the grotto Delle Specchie, and elsewhere.

XIII. Native salt-petre, in hexagonal, obliquely cut, and transparent crystals. This is very rare, and is found upon the bare stone in the side cavities of the Carolina grotto.

XIV. Mineralized salt-petre, in the earth; it is very abundant at the foot of the rock, and in the caverns.

Such are the various sorts of native salt-petre hitherto discovered. They are indeed trifling in their varieties, but necessary to be mentioned, because mineral salt-petre is considered at

Naples

Naples as a perfect heterodoxy.* It is now however ascertained beyond a doubt, not only that native salt-petre does actually exist, but that it does so here in great purity and quantity, and ought consequently to produce a considerable profit to him, who has the good fortune to possess it. The researches of Abbé Fortis, Zimmermann, Hawkins, and Melchior Delfico, have sufficiently proved, that the King of Naples is precisely so circumstanced as to Molfetta;

* I made an attempt to prove to the incredulous Neapolitans, the actual existence of mineral salt-petre. For upon visiting the Fuso, I was accompanied by a stone-cutter who made large and fresh breaches in the different sorts of stone, and procured me a variety of valuable specimens. I also took away pieces of the hardest limestone, carefully wiped off all the salt-petre, so as to leave no traces of it upon the stone, and packed them up in a closely shut trunk, which I sent to Naples; this trunk arrived there soon after my return, and I then found the pieces of lime-stone quite covered with crystallized salt-petre, although only two months had elapsed since I had so carefully wiped them. The same has frequently happened to Abbé Fortis, to Don Cito Minervino, to the academy at Padua, and in the collection of Abbé Spallanzani at Pavia. To this may be added the intelligence that in the Basilicata and Calabria Ultra, great quantities of lime-stone, in like manner impregnated with salt-petre, have been discovered.

and

and this is made still clearer by the generous sacrifices of the family of Giovino, resident at that place: for they have made several capital experiments with this salt-petre, at their own charges, and proved that after all the process of purifying, it loses only three parts in a hundred. Who then would imagine that notwithstanding all this, a certain Targioni, a stranger, and one who is not only totally ignorant of mineralogy, but is also a public impostor, should be sent to Molfetta, as superintendant of the salt-petre works! This worthy wight, by virtue of his knowledge, and in consequence of the weighty arguments of the undertaker of the works, has, according to his printed treatise, not only found no natural salt-petre in the Pulo di Molfetta, but has never even seen any of the large caverns there, which so many others have examined. He has however discovered it to be more advantageous to the court to establish a salt-petre refinery in the Pulo itself; and though the native salt-petre, when thoroughly prepared, would have only cost the King twenty-four ducats—(£4. 10s.) per

per cantaro,* at which rate several individuals offered to deliver it, the ingenious Targioni thinks it better that it should cost seventy ducats—(L13. 2s. 6d.) that God's bounty in the caverns should be wasted, and that the town of Molfetta should at the same time go to ruin. For although a cistern might have been formed at less expence near the Pulo, the water requisite for the works is brought upon asses from Molfetta, which is a mile and an half distant; thus is that town put in danger of perishing for want of water, the Puglia Petrosa, in which it stands, being almost destitute of that necessary article. That such an adventurer as Targioni should be open to corruption, that he should make such injudicious arrangements, and that he should thus grossly impose upon the Crown, is not matter of astonishment; but that the King and his able minister should employ such a man in an operation of so great importance, when honest and intelligent persons are easily

* A cantaro is equal to an hundred weight and three quarters, English measure.

to be found, is the wonder of every one. In truth it is said that the voice of a whole suffering province has at length reached the ears of the minister, and that he is resolved to grant the Pulo for ten years to a society of persons who are to deliver a certain quantity of salt-petre to the Crown at a fixed price, and who are well acquainted with the value of the native salt-petre. After heartily wishing that this report may be verified, I return to the relation of my journey.

Although Molfetta is a dirty, ugly, and ill built town, it is very populous in proportion to its extent, and contains 12,000 inhabitants; it carries on a brisk and extensive trade in dried figs, almonds, carobs, and oil, of which it annually exports 10,000 *salme**.

The inhabitants not only build their own merchant vessels, which are extremely well constructed, but they also navigate them, and are deemed the most expert mariners of the Adriatic Gulph. There is no instance upon

* A *salma* contains about 40 English gallons.

record,

record, of any one of their ships being lost, although that misfortune often happens to their fellow-navigators of that sea. Their principal trade lies with Ferrara, Venice, and Trieste. From the former they import timber for ship-building, hemp, and flax, of which part is employed in making their ropes and sail-cloth, and part in the manufacture of a fine sort of linen. From Venice and Trieste they bring iron and other metal wares, grocery, and glass, all in exchange for articles of their own production. But the merchants not only deal in this sort of simple barter, but often make very fortunate speculations, in which they have a peculiar degree of dexterity. It is with them as with their mariners; for there is no example of a Molfetta merchant being a bankrupt. Indeed they seldom become rich upon a sudden, but, for the greater part, grow opulent by degrees. It appears that Molfetta flourished as a considerable trading town in the past centuries; for they preserve a document dated in 1438, containing an agreement between Molfetta and Amalfi, a very celebrated

celebrated commercial city in the twelfth and thirteenth centuries, that the citizens of the one place should be reciprocally considered as citizens of the other; a sort of Hanseatic league.

The town belongs to the house of Spinola, but their interest in the custom-house is farmed by the Crown, to the great detriment of commerce; for merchandizes worth six ducats, (£1. 1s. 6d.) that paid the Baron only four carlini (1s. 6d.), now pays a ducat (3s. 9d.) to the King, being the sixth part of the value of the goods.

SECTION

SECTION III.

From MOLFETTA to ST. BASIL and TARANTO.

UPON the afternoon of the 31st we left Molfetta, where we had been loaded with civilities by Baron Giovini, and where we quitted Abbé Fortis, whilst we proceeded upon our journey to Bari, by way of *Giovannazzo*, which is situated upon the sea side, four miles from Molfetta. The road is the worst I ever travelled in my life, and is so full of rocks, that the mules sprang like goats from one to the other, so that we were soon obliged to quit the carriage, and continue our route on foot.

The country resembled a kitchen garden, full of all kinds of vegetables, amongst which the salad of Molfetta is famous for its tenderness. It is there and throughout Apulia served up with the desert, and eaten only with salt, like fennel at Naples, and the large beans (*Vicio Fabie* Max. Linn. *Fractus*), in the southern provin-

ces. May not the constant use of these vegetables, and of a great quantity of fruit and ice, have an influence on the national character*?

Beyond the inconsiderable town of Giovannazzo, the soil becomes poor and sandy; but the country is not less diligently cultivated, and produces corn, wine, oil, carobs, and almonds, in great abundance. The road, which is somewhat better, generally passes near the sea, which throws up an incredible quantity of alga. It is gathered in heaps, after the manner of the ancients, and either mixed with dung, and suffered to rot,† or strewed upon the road, and from thence carried and spread upon the fields. All the peasants I saw hereabouts, wore red caps; and all the oxen were of a greyish colour.

Acra circum

Rapula, lactuca, radices; qualia lussu

Pervellunt stomachum; fiser, alec, facula coa.

HORAT. Sat. I. ii. Sat. viii. v. 7.

† *Alii algam marinam obrunt ad radices, cui nonnulli*
Aercus miscant Asinum atque Porcium.

PALLAD. lib. iv. c. 10.

Bari

Bari, sixteen miles from Molfetta, appears to great advantage at a distance. It is indeed a considerable town containing 20,000 inhabitants, and capable of accommodating double that number; but the former posterity of this place is no more; like most of the ports of the Adriatic, it daily falls into decay; and a small garrison, and a trifling trade, enliven it but a little. Its inhabitants are no lovers of the watery element, and leave the entire transport of their merchandize to the Scyllitans, who inhabit the western coast of Calabria Ultra. They annually carry from Bari about 12,000 salme of oil, and a considerable quantity of almonds, fennel, cummin, and aniseed, and a sort of seed called by them Opepe (and which is probably coriander), together with raw cotton, and demifine sort of cotton cloth, which is very well manufactured at Monopoli. In return they bring all sorts of articles from Naples, wood, flax, and hemp from Ferrara, glass from Venice, and iron ware and grocery from Trieste. These articles are consumed not only in the different

ports I have hitherto mentioned, but also in the inland towns and villages, to which the sea-ports serve as warehouses.

The trade carried on by all the sea-ports of Apulia is very small in comparison of that which their admirable position would admit. Manfredoni, Barletta, and Trani are principally engaged in the corn trade; and there is a fixed tax of three tornese and an half upon every tomolo of wheat*, and the half of that sum upon every tomolo of other grain, to be paid by the foreign purchaser. Bisceglia is nearly destitute of commerce; and Molfetta, Giovenazzi, and Bari limit themselves to the mere productions of their soil; such as oil and almonds, and the other articles enumerated at Bari. Two main reasons render the trade upon this coast very inconsiderable; first, there is no kind of method or order in the management of it; each town, and each species of

* According to M. de Salis, three tornese and an half are equal to about nine pence; but Swinburne reckons a tomolo at a much lower rate.

Two tomoli are equal to three English bushels.

merchandize

merchandize therein, has its peculiar weight and measure, as well as its peculiar tax; so that the tax-gatherers are continually referring to their books, and the confusion is so great, that the oldest trader is obliged to have his table of weights and measures in his hand, whenever he wants to buy or sell. The necessity of establishing a familiarity of weights and measures throughout the kingdom, and of introducing the very easy simplification and union of the taxes, has been repeatedly pointed out to the government; but the daily decrease of the royal revenues, and the declining state of commerce, have as yet made no impression upon the court. In vain do all the maritime provinces exclaim against the present usages; for the tax-gatherers, and their comrades, are louder and more persuasive in their exclamations; and the long established pernicious system is permitted to remain. The second cause arises from the injudicious management of property; although the country around Bari, and throughout the province, is so rocky, that the

neighbourhood of that town in particular does not produce corn sufficient for its inhabitants; yet it is well calculated for the cultivation of vines, and still better suited to that of the olive-tree. Some well-intended proprietors were once at the expence and trouble of preparing their oil like that of Genoa and Monaco; and their attempts were crowned with unlooked-for success; but as they were neither rewarded and encouraged, nor even protected against the persecutions of the slaves of the old custom, they were constrained to discontinue their labours, and to make a bad sort of oil, which is chiefly sold to the Genoese, who also carry away the lees, together with the soda from Sicily, for the purposes of their manufactories of soap. The mulberry-tree would flourish in this country equally with the olive; and as I had read in some old author that in the time of the Arragoman kings, this province produced a great quantity of silk, I expected to see immeasurable plantations of mulberry-trees, and was much astonished at not meeting with
a single

a single tree. This mystery was soon unravelled, when I was informed that some years since an inhabitant of Beri procured leave from the government to plant several thousand mulberry-trees, upon the encouraging condition of paying three carlini (1s. 1½d.) for every pound of silk. Every other country would in this case have held out a recompense to the adventurer, but it was reserved for the government of Naples to lay on taxes before the tree was planted. It would be unjust towards the King and his ministers, did we wholly impute to them the wretched state of this country; but if the King would only once resolve to visit all his territories, and be ocular witness of the misery of his subjects, and if his ministers would then advise him how he might meliorate their condition, I am confident that he would eagerly adopt every plan conducive to the happiness of his subjects. The evil is, that he is ignorant of the real state of his dominions, and that the governors and sub-governors of his provinces in general abuse the royal confidence.

science most grossly, and are the authors of all the calamities.

Upon the first of April we quitted Bari and the sea-coast, and traversed a vast forest of almond-trees, occasionally diversified with olive and other fruit-trees, under the shade of whose branches was the growing corn. The almond-trees appear to be very judiciously managed; for the crown is hollowed out, so as to give free circulation to the air; the luxuriant shoots are carefully cut off, and the earth is occasionally stirred around the roots. Almonds are the chief and most profitable production of the interior part of this province, but do not always succeed. They suffered so much during the last severe winter, that no fruit is this year to be expected; but the olive-trees which grow amongst them, and are thought to require a milder climate, have not been the least injured. Near the inconsiderable town of Canito, twelve miles from Bari, terminate the plantations; the whole country becomes one level field, that chiefly produces corn, together with a few artichokes;

artichokes; and some considerable tracts were now prepared for the reception of the cotton-seed. We travelled during ten miles across this uniform plain, which is bounded by the extensive oak-forest of Gioia. In this forest, which, is upwards of fifty miles in circumference, and twenty-four in its greatest breadth, the little insignificant towns of Aquaviva and Gioia have cleared a portion of ground, now producing corn, and a quantity of large beans, which, with a little bread, compose the usual food of the day-labourer in this country. Late in the evening we arrived at St. Basil, a country-house belonging to the Duke of Martina, after a fatiguing and tedious day's journey of forty miles. That nobleman is of the family of the Caraccioli, one of the most illustrious in the kingdom, and possesses very princely domains in this and the neighbouring provinces. My companion, the Archbishop, had greatly prepossessed me in his favour, by the description he gave me of his moral character, and especially of his love of a country life, and his distaste

taste for that of a court and city. In fact it is no small recommendation for a Baron of the kingdom of Naples to reside upon his property, rather than in the capital, where most of them squander not only their annual revenues, but their whole estates, in gaming and the lowest debaucheries, and thus render themselves the devoted slaves of the court*. Great therefore as were my expectations, they were yet exceeded by the very simple, open, friendly, and hearty manners of the Duke, and of his venerable mother, of the noble house of Avalos. I was charmed with that princely matron, who though ninety years of age, enjoys the most perfect use of all her faculties, and possesses a most acute and penetrating understanding. Although the King addresses her by the honourable name of "Mother," and although she is the first lady of the court, yet is she wholly

* May not the same be said of the nobility and great landholders in Great Britain, whose country-seats, once the abode of hospitality and independence, are now deserted for the ruinous pleasures of London, and the watering places?

desstitute

destitute of pride, and is adored by her children and relations, and more especially by her domestics and vassals. With such amiable and unaffected persons I presently became familiar, and have often felt myself more under restraint with many new-made nobles and worldly village-magistrates, than here.

During the supper, which though plentiful, was a perfectly rural repast, the conversation turned upon the nature of the country, and the state of agriculture. My enquiries upon that head greatly pleased the Duke, who discovered his extreme partiality for country occupations, and promised to shew me all his new arrangements, and his different flocks and herds. But I never suspected that in order to procure me this satisfaction, he was to send (as I afterwards found he did) eight or nine miles in the night to his shepherds and cowherds, to be at his house, with their flocks and herds, by break of day.

The beauty of the morning gave double charms to the rural environs of the house, surrounded

rounded by extensive pasture grounds, bounded on one side by distant hills, and on the other by the wood of Gioia, towards which we proceeded to the sheepfold. The agreeable coolness of the morning, the pearls of dew trembling upon a thousand flowers, and the melodious notes of the feathered throng, had lulled me into the sweetest reverie, when I was suddenly roused by the sound of horn, hautboys, a bag-pipe, and a provincial sort of drum. It was a band of shepherds, who advancing towards us with their music, and a flag, cordially saluted us, and then preceded with their Arcadian music. Not far from the sheepfold, we were met by the chief of the shepherds, a venerable old man, who welcomed us with a hearty shake of the hand. He first conducted us to the dairy, where are made the small cheeses of sheep's and goat's milk, and then to the houses or stalls, which are all built of freestone, in rows, with a variety of divisions. Before them is a large square inclosure, divided into five equal parts; in the first division, and
in

in the stalls thereto belonging, were the ewes big with young; in the second, were the sucking lambs; in the third and fourth were the two year old ewes, and in the fifth were the lambs that had done sucking. All the sheep, in these five compartments, passed in review before us. They were entirely of the white breed, called Pecore Gentili, or fine woolled; and the chief shepherd assured us that they amounted to 3000. The Duke rejects the black sort, on account of the bad quality of the wool. Several shepherd's dogs, of the true breed, with long white hair, accompanied and watched the flocks; and I heard much in praise of their intrepidity, and other good qualities. We next visited the milking-house, which is very commodiously arranged, and consists of an oblong, arched room, in each of whose two sides are four apertures like doorways, leading on either side into an inclosed court. At milking time the sheep are driven into one of these courts, and successively passed through one of the apertures, where a man waits

waits to milk them, which being done, they are let through the opposite opening into the other court, and are thus speedily milked. There is also a convenient house for shearing the sheep. All these buildings have been erected by the Duke, contrary to the usual custom of the country, where the flocks remain in the open air during the whole year; and except a few miserable huts by way of dairies, all the other business is performed in the open air. This custom proved very fatal to the proprietors of sheep during the last severe winter; for more than 40,000 sheep perished in the eastern provinces of the kingdom; whilst the Duke, in consequence of his judicious management, lost not a single one. But I now hear that his example has been since followed by several sheep-owners*. His flocks would indeed have

* In comparandis ovibus illa etiam tutela humilis facere stabula. Namque id pecus, quamvis ex omnibus animalibus vestitissimum, frigoris tamen impatientissimum est, nec minus aëvi vaporis.

COLUMELLA, lib. viii. cap. 3.

And he speaks thus of the Tarentine sheep—c. iv. Nam cum sit universum genus lanigerum ceteris pecudibus mollius,

been protected against cold and tempestuous weather, in wooden houses, as well as in these arched freestone buildings; but the rich man who takes a pleasure in such an useful occupation as husbandry, may well be allowed a certain degree of magnificence, in a case where too much œconomy would be even more prejudicial. I now learned that the sheep are managed in the following manner: to every ten ewes is allowed one ram; but they are only put together at the age of three years*. The supernumerary rams are not cut, but fold; it being thought more advantageous to sell them young, than to keep them three years without profit, and at some hazard. This may answer in a country where fat mutton is of little value; but the shepherds of the Alps would be

...liis, tum ex ovibus, tarentinum est molliſſimum.... nec æſtus nec frigora patiens; raro foris plerumque domi alitur.

Primum providendum ut totum annum reſte paſcantur intus et foris. Stabula idoneo loco—&c.

Varron. *Re Ruſt.* l. ii. c. 2. Edit. Dordrecht, 1619.

* *Ejus quadrupedis ætas ad progredienda optima eſt triſima.*

Col. lib. viii. c. 3.

lib. viii.

of

of a very different opinion. All the Duke's flocks are of the species called *pecora gentili*, whose wool is very fine and white, and was much esteemed by the ancients*. This is the great source of his profits; for they are shorn twice in the year; once entirely in spring, but only half in summer; and the wool is sold raw. Some profit also arises from the cheeses, which are excellent; but probably would neither be so good, or keep so long, if goat's milk were not employed in preparing them. Salt is never given to the Duke's sheep, and great care is taken not to drive them upon the pastures in the morning until the dew be off the grass. I was assured by my Amyntas, that the omission of this precaution is one of the chief causes of the numerous disorders to which sheep are liable, and that owing to the observation of it, his sheep are very seldom

* *Continuoque greges villis, lege molles, albos.*

V. 10. Georg. lib. iii. v. 386.

Colorem cunctis opibus, non citius est utilior.

COLUM. lib. viii. c. 2.

diseased. This appeared to me rather extraordinary, as in other places it is thought that the dew is serviceable to sheep. Virgil speaks favourably of the dew, and Columella makes a distinction between the dew and the hoar frosts, which last he considers prejudicial *. I can therefore only explain this by supposing that as long as the sheep remain near St. Basil, where the climate is rather raw, the dew is too frosty for the sheep to be let out early in the morning; for in the summer they are without difficulty allowed to enjoy the dewy pastures; and in that season the Duke sends all his flocks to Buccino, a lordship belonging to him, in the principality of Salerno. The inhabitants of the province where the Duke resides, in general pay considerable attention to

* *Luciferi primo cum sidere, frigida rura*

Caspamos, dum mane novum, dum gramina canent,

Et ros in tenera pecori gratissimus herba.

Virg. Georg. lib. iii. v. 324.

Nam pruinosa iis herba pecudi gravedinem creat, ventremque proluit.

Colum. lib. viii. c. 3.

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the

the breeding of sheep, although not nearly so much as did the ancients*. They are more assiduous in making a quantity of cheese, than in procuring fine wool; and as the former is of considerable value in the country itself, and is much esteemed by the inhabitants, they prefer the black sheep, called *pecore moscie*, which give abundance of milk, but produce a very inferior sort of wool. If manufactures were encouraged, the people would perhaps attend more to the quality of the wool, and endeavour to make it as celebrated as in the time of the Romans; but as no encouragement is given to that object, and the peasant looks to his more immediate profit, the race which

* *Sin armenta magis studium vitalisque tueri,
Aut fœtus ovium, aut amentes calta capellas;
Saltus et saturi petito longinqua Tarenti.*

VIRG. Georg. lib. ii. v. 195.

*Circa Tarentum Canasinumque fontana nobilitatem ha-
bent.*

PLIN. Hist. Nat. lib. viii. c. 48.

*Generis eximii Calabria Appulæque, milites nostri existi-
mabant; earumque optimas Tarentina.*

COLUM. lib. viii. c. 2.

bore

bore the fine and beautiful white wool, and which was universal in the country, has been long since nearly destroyed. Twenty rotoli of raw wool fetch no more than from 35 to 40 carlini—(from 13s. 1½d. to 15s.)—whilst new cheese is sold at 16 grana the rotolo*. An hundred sheep daily produce eight rotoli of cheese, and every sheep is estimated to bring in a ducat—3s. 9d.—yearly, clear of all charges. It is nearly the general custom in this province not to cut the lambs, but to dispose of the supernumerary rams, whilst young. Before I quit this article, I cannot omit mentioning an obstruction communicated to me sometime since by Dr. Manni, relative to a disorder to which the sheep in the Tarentine country are subject. When in the morning they have eaten the hypericum crispum, they soon swell, and shew signs of an inflammation, especially about the mouth; after which the parts so inflamed become bald, and look as if covered with the

* A rotolo is equal to about two English pounds, and sixteen grana are about seven-pence.

itch, and the animal very soon dies, bloated, and with its wool drawn out like bristles. This disorder, which is called the fumolo, is attributed to a very sharp and corrosive humour that oozes from the plant, and poisons the dew. At Taranto they think that this is prejudicial only to the white sheep; but in the province of Lecce is a plant called Fumolo, which is mortal to black sheep, as well as white; but that is properly the *chariophyllum sylvestre*, which is very common, and in some places poisonous, though not so in others, and often spreads devastation amongst young poultry. The oxen are also said to be sometimes injured by the *hypericum perforatum*, which grows in the same province.

From this pastoral retreat we now returned towards the house, to be present at a sort of Tartarian exhibition. Three different droves of horses appeared, each in two divisions; the one containing the full-sized horses, and the other the foals. We first examined the mares of an inferior sort, the refuse of the whole, and kept

Kept entirely for breeding mules. For this purpose the Duke has three asses of extraordinary size and colour, each of which cost him 300 ducats—(£ 56. 5s.)—and which are always kept in the stable, except in the covering season. The current price of a mule, three months old, is 50 ducats—(£ 9. 7s. 6d.—and a four years old well matched pair, of a good breed, usually fetch from three to four hundred ducats—(from £. 56. 5s. to £ 75. From the mares we proceeded to the mules they had foaled; then to the mares of the second order, and their foals; and, lastly, to the elect. These were indeed of incomparable beauty; large, and chiefly either of a dark or bright sorrel colour; nor would the nicest connoisseur find in them any other blemish, than that their ears stand a little too distant from each other. The Duke's horses are principally noted for their soundness and hardiness, and the peculiar goodness of their hoofs; qualities for which they are probably indebted to the dry and hard nature of the pasture grounds, and to being kept out in

all weathers, without ever entering a stable*. The foals that are kept for private use are broken in at three years old, and all the horses for which the Duke has no employment, are sold in their fourth year, either at the fair of Gravina, or that of Salerno, where the current price of a pair of fine four years old coach-horses, without blemish, is from 150 to 200 ducats—(from £28. 2s. 6d. to £37. 10s.)—Until lately no horses were cut, and none but stallions were used, as well for riding as for draught; the mares being kept entirely as brood mares. But this custom is now abolished, and the cavalry is in future to be supplied with mares and geldings. Formerly every Baron in the kingdom of the Two Sicilies had one or more studs; and the Neapolitan horses were much and every where esteemed and sought after, on account of their durability and other good qualities, as was likewise the case

* Ceteri passim toto anno inter pascua admissi secum maribus implantur. Sed his armentis pascua legamus pinguisima hyeme aprica; frigida et opaca providemus estate, nec

amongst the ancients*. The opulent modern nobility of Rome had no other coach-horses than the Neapolitan; and the exportation was very constant and advantageous, until a certain ingenious minister (the Marquis Squillace, I believe) thought proper to lay a heavy tax upon that article; by which the price of horses was so unreasonably augmented that foreigners gave up the trade, and the Roman noblemen, awaking from their lethargy, formed studs of brood mares, imported stallions of renown, and furnished themselves and the country with horses. The Neapolitans therefore finding their horses remain upon their hands, suffered their studs either to perish or degenerate, and turned themselves towards the breeding of mules,

nec adeo mollibus locis nata ut ungularum firmitas de asperitate nil sentiat.

PALLAD. lib. iii. l. 13.

* Itaque ad hoc nobiles a regionibus dicuntur. In Græciâ Thessalici equi, a terrâ Appuli, &c.

VARRO, lib. ii. c. 7.

Horum Equorum et Equarum greges qui habere voluerint (ut habent aliqui in Peloponeso et in Apuliâ).

IBID.

F 4.

which

which was more profitable; so that the good race was nearly lost, and the King of Naples who might have had the finest cavalry in the world, would soon have been obliged to import horses at an enormous expence, had he not been desired to take off the tax, to encourage the establishment of studs, and particularly to abolish a tyrannical law, which empowered the officers who had the charge of remounting the cavalry, to choose out of the studs, and at the fairs, what horses they pleased, at a fixed and inferior price. It is now hoped that as the Neapolitan horses have the decided advantage over others, this branch of trade will again introduce large sums into the kingdom. The late arrangement of the cavalry has shewn how strong, active, spirited, docile, and durable these horses are, as well as how much a proper management of the studs merits the attention of ministers, who indeed have now listened to good advice, and speedily adopted it.

Three distinct herds of cattle now passed by. The first comprehended the beasts of the best quality;

quality; the next, the inferior sort; and the third, the calves. As a Swiss, I could not sufficiently admire the beauty of these animals. The cows were chiefly grey, with small horns, short feet, and very long carcasses. The steers were of the most beautiful dark brown, and of a size such as I had never seen; to a little head, with sparkling eyes, hung an enormous dewlap, from the throat almost to the ground*. The hinder parts were as much as possible like those of a lion, and reminded me of the Toro Farnese, which some Conoscenti have unjustly pronounced to bear too great a resemblance to the king of beasts. I could reproach these steers with nothing but a remarkable degree of unwieldiness, although I must confess that I have seldom seen so majestic an animal. These herds remain out all weathers throughout the year. No more butter is made than is sufficient for the family consumption; it being unknown almost throughout the kingdom;

* Et crurum tenus a mento palearia pendent.

Vixg. Georg. lib. iii. v. 5.

where

where oil is made use of in its stead. The rest of the milk is employed in making cheese, of which the best sort is here called Caccio Cavallo, and is in high estimation; but I thought it too dry and tallowy; although the milk and butter, as well as the other articles of which they composed a part, and especially the Sorbetti or Sherbets, were peculiarly grateful to me. There is a considerable home trade in this cheese, which is universally esteemed.

Very little attention is paid throughout the kingdom to the breeding of cattle, except in the provinces of Abruzzo, and Calabria, where indeed it is upon a very indifferent footing; and except the Duke of Martini, very few barons keep any stock of cattle. All that nature produces in the greater part of the kingdom, is owing to the mildness of the climate and the goodness of the soil, rather than to the labour and assiduity of the inhabitants. Of the proper management of land, of manuring, and of artificial grasses, the provinces in general have no sort of idea; and except in the districts
where

where wine, oil, and almonds are produced, the eternal round of husbandry consists in sowing corn, and letting the land lay fallow. None but the barons, and some towns, have any pasture grounds; and grass lands for mowing, are utterly unknown. I asked my worthy host, whom I found quite free from prejudice, why, with so many cattle, and such an extensive tract of land, he did not try the artificial grasses, which would not only increase the value of his flocks and herds, but also of his arable lands, vine-yards, and olive-grounds, by the manure which his cattle would thereby afford. He replied that he had formerly sent for and sown some clover-feed, but that the grass died away at the end of two years, and that the experiment had been extremely expensive on account of the transport of the seed. Probably he had been furnished with a particular sort of Dutch clover-feed that lasts only one, or at most, two years. I advised him to try lucerne and faint-foin, with which he was unacquainted, but promised to procure. It is incredible in what clouds of darkness the science
of

of agriculture in this kingdom is enveloped, and still more incredible what feeble efforts are made to extricate it.

I can say nothing of the Duke's buffaloes, which were twenty-four miles from the house; but shall have an opportunity of fully mentioning that ugly beast. After seeing the Duke's saddle-horses, and a legion of all kinds of poultry, we assisted at an excellent repast, and then took leave of this amiable family, whose attentions will ever present themselves to my remembrance. The road from St. Basil carried us across pasture grounds and cornfields, to an elevated plain, where I first remarked that we were upon a chain of hills which branch off from the main body of the Appenines, and at the distance of eight or ten miles bound the plain of Taranto, covered with plantations of olive-trees. Into this plain we descended down a hill cloathed with rosemary and myrtle bushes, and having on each side a small limestone valley, full of grottos and excavations. Melancholy is the view amongst the dark and mournful

mournful olive-trees; but the mind is cheered by the recollection of the riches of this immeasurable plain. Upon the declivity of the hill, lies the town of Mazafra, nine miles from Taranta. The road follows the direction of the hills, which when bald, discover the horizontal strata of lime-stone, and are full of caverns abounding with natural saltpetre, like those in the Pulo di Molfetta. It was night before we reached the city, the archbishop having studiously delayed our departure, in order to avoid all kind of rejoicing at his arrival. He had been absent a year and an half from his diocese; not for the purpose of dissipating the ample revenues of his archbishoprick at Naples, like most of his worthy brethren; but he had been summoned, at the instance of a worthless enemy, to defend himself against the cruel accusations with which he had been blackened. During all that time did innocence struggle against cabals which employed all their diabolical weapons; but his innocence most clearly confounded them, and he was now returning to his flock,

flock, which had most earnestly prayed to the heavenly and earthly powers for his restoration. He was desirous of avoiding the effusion of popular joy, which however justifiable, his exalted spirit wished not to be considered as a triumph over his enemies. We travelled therefore in the shades of evening, which we increased by the gloom of the olive-trees, and were but seldom broken through by the lustre of the rising moon. A tear stood in the eyes of the prelate, whose heart was full of the tenderest feelings, and anticipated the satisfaction which a true shepherd feels upon being restored to his idolizing flock. A solemn stillness reigned around us; nor would I, for the world, have interrupted it. Near the town, we were met by a coach full of gentlemen who had some slight suspicion of the archbishop's arrival. Their meeting was truly affecting, nor had I ever thought that there was so much friendship and cordiality in Italy. No sooner were the people informed of the arrival of their respected prelate, than the city resounded with their reiterated acclamations, and the

the Archiepiscopal Palace overflowed with their numbers. Never was a blessing received with more heartfelt joy; and "God be praised that our Father is restored to us", was the cry of the people, the poor, the widow, and the orphan.

SECTION

SECTION IV.

TARANTO.

AT length I am arrived at the pristine "Molle Tarentum"; and in truth I seemed to breathe a softer air as soon as I reached the environs of the town. Whether my imagination was exalted by the recollection of the ancient Tarentum, so happy and so esteemed, or whether the delightful climate had any particularly agreeable influence upon my body, I know not, but I felt a general well being upon entering the colony of the bold Phalantus.

Every day after my arrival was devoted to the examination of what is remarkable in the town and its vicinity; and my evenings were passed in the society of the ladies. I never should have thought of finding such amiable and pleasing women in an almost unfrequented provincial town in a remote corner of Italy. Most of them indeed are acquainted with the capital

capital of their country; but it is so much the more remarkable that they should have brought from thence, only the easy manners of a court, without its duplicity, vanity, and dissipation. I also experienced in two families that the Italian women are capable of the most honourable friendship, as much as those of other nations.

The situation of the city of Taranto is one of the finest in Europe. Where the Adriatic sea unites with the Ionian, it presses the Peninsula of Italy into a narrow neck of land, where bounds are set to the farther progress of that invading despot by a chain of limestone hills, which, branching from the mainstock of the Appennines directly towards the East, form the promontory of *Finibus Terræ*, and the widely extended Gulph of Taranto. Nearly at the bottom of this gulph, two points of land press so closely upon a rock which lies between them, that the Bay is there reduced into two narrow channels, but quickly stretches out again, and forms a considerable inland lake. Upon that rock stands Taranto, commanding not only this
lake

lake, called Mare Piccolo, surrounded by fertile hills and fields, but also the outer sea, which is formed into a harbour called Mare Grande, by cape St. Vito on the one hand, and cape St. Corluchio on the other, and by two islands situated between them. The lofty mountains of Calabria, now covered with snow, stretching out towards the South West, mark to the distance of more than one hundred miles, the farthest limits of the gulph, which, towards the South East, are lost amidst the vast expanse of water. It is to be lamented that the interior state of the town should in no degree correspond with the beauty of its situation. Eighteen thousand inhabitants are crowded together upon this narrow rock, and dwell in houses so lofty, and so closely pressed together, as to render the streets narrow, dark, and winding; besides which, the pavement is extremely bad, and especially upon the Marina: which, outdoing even the customary Italian filth, is hardly passable on account of the excessive nastiness and sink. This quarter evidently proves that the town is remarkably

markedly populous for its extent. A few years since some patriotic citizens proposed to build a suburb upon the continent, with which the rock is on either side connected by a bridge, in order to ease the town of its super-abundant population, and provide for the families that are continually withdrawing from the adjoining baronies. Although the scheme was approved by Government, it received no farther encouragement from that quarter; and the proprietors of the ground upon which the houses were to be erected, had so little patriotism as to require an immoderate price for it, and so little knowledge of their own private advantage, as to refuse building the houses at their own charges. Some ingenious person also caused it to be made a condition by government that the city-gate should be shut two hours after sun-set; so that the inhabitants of the suburb would have been obliged to quit the town at that hour. Here it ought not to be forgotten that, notwithstanding Taranto is a fortress, and a garrison town, there are more than twenty breaches in

the ruined walls, through which coaches might pass without difficulty. In short the whole scheme, which, if executed, must have turned out considerably to the advantage of the town and country, was abandoned. And so must ever be the case as long as the King and his ministers remain unacquainted with the interior of the kingdom, and continue to rely upon governors who prefer their own private interests to the public welfare.

The following list points out the population of Taranto from 1778 to 1787, both inclusive.

Years.	Souls.	Births.
1778.	17779	673
1779.	17964	689
1780.	18885	705
1781.	17609	555
1782.	17993	649
1783.	17735	622
1784.	18198	605
1785.	17464	728
1786.	17644	709
1787.	18457	648

I was

I was unable to procure the list of deaths; but it must be remembered that for reasons I shall hereafter mention, the air is not of the most salutary kind, and that it often occasions a considerable number of deaths in a year. I have already said that the town frequently receives a great increase of inhabitants; this usually happens in unproductive years, or when a severe and merciless Baron pays a visit to his vassals.

How striking is the difference between the present population, and that of the time of Archyde, when Tyranto was at the summit of its prosperity. The city alone could send forth into the field 30,000 infantry and 3,000 cavalry; not is the population of that period at all exaggerated, when it is said to have amounted to 300,000 souls. At that time indeed the city occupied a much larger space; and the ruins sufficiently point out that it extended not only on both shores of the Mare Grande, but also around the greatest part of the Mare Piccolo.

He who, in visiting these provinces, examines

and reflects upon the admirable positions of all the renowned cities of antiquity, now in a great measure destroyed, and notices the actual extensive tracts of uninhabited country, at the same time bearing in mind the beauty of the climate, can no longer be astonished that the ancient writers should have enumerated the number and population of the different nations and cities at so high a rate, especially when various other causes are recollected.

As the town itself furnished nothing but what Richard and Savignani have amply described; I began to examine the neighbourhood, and at the third day after my arrival, paid a visit to the Galles; not so much because the Mæturni had upon its thickly shaded banks, flocks of the shepherds and their renowned flocks of sheep which were scattered upon the flowery fields around it*, as because the venerable Corycius

Dulce pellitis ovibus Galen flumen.

Quo niger hærere faciens culta Galles.

Corycium vidisse senem.

Vind. Georg. lib. iv. v. 126.

Die

there instructed him in the most useful of all sciences. With impatience did I hasten to this celebrated river; but all its charms were fled: in lieu of well wooded banks, not a tree to be discovered in the neighbourhood; and instead of a fresh, transparent stream, I found only a muddy ditch, which is overgrown with rushes, and has converted the surrounding country into an offensive swamp. Only at its discharge into the Mare Piccolo have the hopes of profit made the fishermen somewhat attentive to clearing it; but even there the Niger Gelafus ran over a white chalky bed, and so compleatly did away my illusion that I indignantly left the degenerated spot, and bitterly reproached the Tarantines, that not one of them had had so much veneration for the ancients, or so much relish for a beautiful situation, commanding a delightful view of the town, seen as in a picture, towering

Dic'it tibi fœdissimè gurgitis illius vortice

Esse vultu omnes fœces, decussatæ græciæ!

Appella Lædæi tibi sœcra hærta Phœacis,

Quæ fœdissimè Cæciliæ calce Gæcæa tegit.

MARTIAL. lib. viii. Ep. 28.

Et Lacedæmonis pecunia culta Gæcæ.

STAT. Silv. lib. iii. Cam. 5.

between the two seas, as to build a villa, and form a garden, which upon this stream might have been almost an Elysiun.

Upon my return I passed near an aqueduct which abundantly supplies the town with water. It is assuredly one of the most remarkable in Italy, as well on account of its extent as its construction; for, if we may believe the Tarentines, the sources are forty miles distant, and the waters run twelve miles in a subterraneous canal cut in the living rock; its course being marked by air-holes, of which one, called *Il pozzo della stella*, is 1,000 palms deep. During the three last miles, the aqueduct consists of arcades, upon which the water is conveyed in pipes of stone. Various are the opinions concerning the age, and the founder of this truly great work. By some it is attributed to the Emperor Nicephorus, who lived in the tenth century; but I am rather inclined to think that it was constructed at the period when the Greeks had rendered Taranto one of their most flourishing colonies in Italy. At least in several ruined Greek

Greek cities, and especially at Syracuse, I have seen aqueducts of a similar construction, whose Grecian origin could not be disputed. However necessary be this aqueduct to the very existence of the city of Taranto, yet does decay now stare it in the face. Four hundred ducts (476) have indeed been for some time in the hands of those whose business it is to pay strict attention to it; but still the arcades are in such bad repair, and the stone pipes so carelessly joined together, that the downfall of part of it is daily to be expected. Some well-disposed persons having discovered that this water was very conveniently situated for irrigating their meadows, applied to the board at Lecce for a privilege for that purpose, by which the whole town would have been in danger of perishing for want of water; and this well imagined project had very nearly been successful.

In the evening I visited the garden of the Theresian Monks, in order to examine the remains of the theatre of Taranto; but a hollow arch, and a few steps covered with briars, and the little conformity of authors as to the situation

men of the place, made me both to acknow-
 ledge that so celebrated a theatre ever occupied
 that spot. I say celebrated, since there it was
 that Archytas enchanted the Tarentines with
 his eloquence, and encouraged them to engage
 in so many glorious wars; thither it was that
 he returned triumphant, and reaped, in the
 joyful acclamations of the people, the laurels
 due to his valour and his wisdom; and there
 was it that the great power of Tarento, espe-
 cially under him, appeared in all its lustre; in
 the number of ambassadors from subject coun-
 tries, and from such as implored his assistance.
 But this very theatre was in some degree acces-
 sary to the ruin of this great city; for a Roman
 fleet, conveying corn from Apulia to Rome,
 being discovered by the people collected upon
 the steps that commanded a view of the gulph,
 was immediately attacked and plundered; and
 in this same theatre did those insolent people
 insult and shamefully misuse the Roman am-
 bassadors who came to demand satisfaction for the
 outrage. Such unprovoked and repeated inju-
 ries occasioned a long and bloody war, which
 terminated

terminated in the annihilation of the wealth of the Tarentines, and in the total extinction of their freedom. It would be very easy to clear away the rubbish from this memorable spot, and probably to lay open the lower part of the theatre; but it being fallen into the hands of monks, is sufficient to prevent such wishes from being realized.

I went next morning to the extremity of Cape St. Vito, which commands a magnificent prospect of the town and gulf, and parts of the distant Calabria. A watch-tower, erected on account of the pirates, contributes more to the enjoyment of this noble scene, than to the purposes of its original destination. This tract of stony pasture ground was covered with caper-bushes, and *aphodelos ramifolius*, which abounds upon the waste lands of the province. I also met with a calcareous sort of tufa, which in some places was broken into for the purposes of building, and was full of all kinds of marine bodies; of which some were petrified, and others in an almost unaltered state. One
cites,

cites, pectinites, and turbinites were by far the most numerous; but there were also some very fine volutites, coralites, echinites, and trochites; the two last whereof appeared to me as unaltered as if just taken out of the sea. Had all these been fossil, their existence would have been easily explained by the vicinity of the sea; but there was also a great quantity of compleatly petrified ones amongst them; and a very learned gentleman of Taranto assured me, that in digging a well upon his estate, twelve miles from the sea, he had found the most perfect fossil oyster-shells in the hard limestone rock, at the depth of seventy-six palms. A great many of the same kind were also found in an argillaceous hill, in the Piana di Calabria, which was perforated in order to give an outlet to a lake.

In the afternoon I usually took an airing upon the eastern shore of the Mare Piccolo, whose beautiful and mirror-like basin, sixteen miles and an half in circumference, and whose undulated banks, diversified with corn fields, vineyards,

vineyards, and plantations of fig and orange trees, afford at every step a novel and interesting picture. In order to enjoy this scenery in perfection, I generally quitted the carriage, and wandered along the banks, where new objects at every moment occupied my mind. The waves of this quiet lake continually roll upon the shore the rarities of nature, or of art; and I here enriched my collection of shells with the most beautiful specimens. Very rare pieces of money, cameos and intaglios, and even articles of gold and silver, are not unfrequently found here, especially between the church of Santa Lucia and the town; the gold and silversmiths street, of the ancient Taranto, being supposed to have occupied that spot. It is not only probable, but has even been proved by experiments, that various remains of antiquity might be found by digging in these environs; and yet there is no one in Taranto, whom the love of arts and sciences has hitherto induced to apply to government for a permission to make researches; and to my enquiries
and

and reproaches upon the subject, I was assured, that the success would be doubtful, but the charges certain. In this neighbourhood also, and behind the Alcantarino Convent, is a hill, called Monte Testaceo, consisting chiefly of the shells of the murex. It is said that the celebrated purple dye of Taranto was formerly prepared near this spot; and it is supposed that a small square cistern near it was used in the preparation of that costly liquor. The commentator upon a very elegant Latin poem, called "*Deliciae Tarentinae*"*, and after him Swinburne (who has made frequent use of that book), have very circumstantially related the process employed by the ancients in the preparation of this celebrated colour. Although Pliny, and other authors of antiquity, have given us several accounts of the

* *Thomae Nicolai de Aquino Viri Patricii et clarissimi Deliciae Tarentinae in illius quatuor distribuitae a Camillo Antonio Ateneio. Candacio, Florentino Tarentinaeque Patricio, Italica versione notisque ornata et nunc primum edita; Neapoli, 1777, 4to.*—with a plan of Taranto. The text is good, and the notes not painstaking; and I have frequently made use of this work.

methods

methods used in extracting that costly liquor, I much doubt whether we are acquainted with the real shell-fish, or with the proper mode of preparing it; for surely the people of Naples and Taranto, in whose seas the murex is found in great abundance, would not fail to turn it to advantage. To put an end to this uncertainty, I have prevailed upon a young but very intelligent naturalist, who resides with the Archbishop of Taranto, to make various experiments with this sort of shell-fish, as well as to try the method handed down to us by the ancients*.

Upon the sixth of April I rode four miles along the eastern shore of the sea, until I reached a spot whose beauty so enchanted me that I could proceed no farther. A narrow but very deep and frigid river there loses itself in the sea, after a winding course through a flat and bushy country. Its banks were skirted by

* I shall speak more fully of this shell-fish in my description of the shells which I collected in the kingdom of Naples.

gardens, over which nature seemed to have
 placed the horn of plenty; for all kinds of
 crops whose fruit can charm our eyes by its
 beauty, or gratify our palates by its flavour,
 grew there as in "their kindred soil," and
 filled the air with the fragrance of their blof-
 soms. A belt of gloomy pines surrounded
 these enchanting gardens, whose holy shade I
 entered with veneration*. The deeds of an-
 cient times rolled before my imagination, like
 the waves of the river before my eyes; and its
 name of Tara reminded me of the founder of
 the soft and once potent Taranto, wrapped in
 the most venerable garment of antiquity. With
 the riches of the surrounding country before
 my eyes, I represented to myself the happy
 times of that ancient city, when, to the enjoy-
 ment of freedom, it united an almost unlimited

We might here refer to what Horace says in his 16th
 Epistle—book the first:

V. 8.quid, si rubicunda benigna

Corus vapores primum ferat? & quoniam in illis

to mal. Multa fruges piceis, multæ damus, juvat undæ prole

Dicas adductam propius frondens Tarentum.

garden

degree

degree of power, immense opulence, and the summit of perfection in the arts and sciences. The bulmy island, surrounded by the murmuring stream, filled me with sensations of melancholy pleasure. It was here that the amiable Octavia accomplished more in one day, than did her fortunate brother in many years of power and success; and here it was that the tender prayers of a wife, and the affecting tears of a beloved sister, induced Antony, the unworthiest and most dissolute of men, to be reconciled to the timid, cunning, and ambitious Octavius; thus giving peace unto the world, and saving millions from destruction*. But

the happy days of Taranto were already passed away, and those Elysian regions already bore the stamp of slavery. This thought put a stop to my soft and melancholy reflections, and I now indignantly remarked, that not a single villa decorated and enlivened this delightful spot. How is it possible that in one of the

* See Scrinbarn—Vol. 2.—who places this interview upon the Balaeno. A.

happiest of climates, where nature has so partially squandered the treasures of beauty and of plenty, men should be so cold and insensible as to prefer being cooped up in a filthy and unwholesome city, to the enjoyment of the salubrious air of this terrestrial paradise! Were the blessings of such a climate bestowed upon the picturesque districts of Switzerland (which are however far surpassed by the environs of the Mare Piccolo), what would induce us to quit our rural habitations? Italians!—I compassionate ye; ye are the spoiled, ungrateful, and degenerate favourites of nature; we are her neglected, yet faithful and affectionate step-children.

The salt-pits are situated three miles north-east of the town, and consists of two lakes, which have no visible communication with the sea; although in stormy weather that is not wholly impossible. In winter they fill so abundantly with water, that the surface of the smallest covers 980 moggie of land, and the largest is increased to nearly the circumference

of eight miles, covering 2772 moggio. In summer the largest lake is wholly dried up, but leaves upon the ground a considerable layer of fine white salt, the property of the King, which is thrown together in large heaps, and afterwards disposed of. The crown annually sells more than 10,000 tomoli of this salt; and it is calculated that at least as much is secretly carried off by the neighbouring peasantry. I observed that soda grew upon the banks of these pits, in great abundance. As not only no traveller, but even no inhabitant of Taranto has visited the islands situated at the entrance of the outer harbour, I prevailed upon the captain of the port to let me make an excursion thither, in his yacht, upon the seventh of April. They are situated about three miles, in a direct line, from the town, and in the time of Thucydides were called the *Chirades*; but a poet in the middle ages termed them *Electrides*, and the largest now bears the name of *Santa Pelasgia*, and the other that of *Sant' Andrea*. Although they

are distinctly seen from every window in the city of Taranto, and from every part of the harbour, yet are they thus mentioned by the over-learned Neapolitan Mazzochi; "*Cluverius Choerades hæc Tarentino Portici objectas fuisse dicit; sane si e regione Taranti rejeta Insulae ullæ existent.*" Even the native of Taranto, who wrote the notes upon the "*Deliciæ Tarentinæ*," says, that the largest of these islands is six miles, and the least three miles in diameter; when, in truth, the first is barely four miles, and the other about two miles in circumference. The stranger, who visits this country, is vexed to find that the accounts of the native authors cannot be relied upon, and that other travellers, not giving themselves the trouble to examine, have servilely copied them, and thus deceived the world by a repetition of false accounts. These islands by no means answered the expectation I had formed of finding something new and worthy of observation. The antiquities, which the appearance of some ruined edifices, had led me

to expect, were reduced to some subterraneous passages, and the remains of a spacious building, said to have been a convent of Basilian monks. Both the islands are flat, uncultivated, and entirely overgrown with brush-wood. The Chapter of Taranto, to which they belong, once caused a part of them to be sown with corn and soda, which succeeded extremely well; but government objecting to the settlement of such families as were necessary for the cultivation of the islands, under pretence of their becoming a nest of smugglers, the design of improving them was relinquished.

I wandered about the largest island with my companion, Dr. Pasquale Mahni, a young man, who, disregarding the contempt in which natural history is held in his native country, applies to the study of that science with the greatest industry and success. The following were his botanical remarks upon these islands:

Rumex acutus. This plant is employed by the people in curing the itch, by bruising it,

Barb.

H 3

or

or otherwise extracting the juice, which they apply to the part affected. *Plumbago Ceylonica*; *Stachys arvensis*; *Litho Spermum arvense*; *Rosmarinus officinalis*; *Lycopsis arvensis*; *Thapsia garganica*; *Clemmatis flammula*; *Narcissus odorus*; *Trifolium tomentosum*; *Rubia tinctorum*; *Hypericum perforatum*; *Pistacia Lentiscus*; and *Dirca*, which does not seem to be the *palustris*, but is used by the common people for the purpose of extracting a yellow dye from it. *Cistus helianthemum*; *Scorpiurus subullosa*; *Arethus bulbosa*; *Isatis Armena*; *Ervum Ervilia*, and *Crithmum maritimum*. *Hyacinthus comosus*; whose root, well boiled, is in much estimation, and is eaten as salad, especially in this province. *Salicornia fruticosa*; the small *Primus silvestris*; *Asphodelus ramosus*; *Orchis flexuosa*; *Aristolochia oblonga*; *Symphitum officinale*; *Thymus vulgaris*, *Sorghus*, *Leontodon*, and *Bromus*; but he could not determine the genera of the three last, without farther examination.

In the mean while I hunted for insects, or
looked

looked for shells upon the shore. Of the former I found only these few: *Scarabeus sticticus*; *Scarabeus hirtellus*; *Silpha atrata*, and the following *Silpha*, which I could not find either in Linnaeus or Scopoli, the only entomological books to be met with at Taranto. *Silpha tota atra, opaca, futura, nitente linea unica elevatiuscula, subtus nitidissime, thorace subdentata, antennis extremitatibus fuscis*; if not otherwise described, it might be called *Silpha Choerulica*.

Chrysomela speciosa; *Cimex Hyosciami*; *Papilio Algira*; *Papilio rubi*; *Phalena geometra undulata*; *Phalena geometra tota testacea*; *Phalena Tinea Colontella*; *Empis pennipes*, and *Tipula rivosa*.

Rabbits are the only four-footed inhabitants of the island, and were in great plenty, until some idle person lately thought proper to import a fox, which speedily made great ravages amongst them. I saw lizards running about in great abundance; but they were chiefly of the common green sort, *Lacerta agilis* Linnæi.

Upon the south-east coast of the island I discovered it to be an entire rock of calcareous tufa, abounding, as at Cape St. Vito, with fossil trochites; and, from the extraordinary quantity of those shells, I figured to myself the origin either of the tufa itself, or of the most perfect lumachella. Upon our return to Taranto the sailors pointed out a place in the sea, where, in smooth water, the ruins of ancient buildings are still discernible. The rocks and shoals between the islands and Cape St. Colichio almost incline me to believe that they were once connected with the main land, and consequently that the harbour of Taranto then deserved the title of Excellent, better than it does at present.

Is it not vexatious that a town so nobly situated as Taranto, and enjoying such an admirable climate, should still be nothing less than healthy? The air is not only very moist, and really dangerous in the evening, but several considerable marshes nearly circumvent the town. From one of them, situated two miles

to the north-east of Taranto, and containing 600 moggie, a drain was formerly made to the sea, which is only a mile and an half distant; but through the negligence of the modern inhabitants, it is now choaked up, and rendered wholly unserviceable. Another morass is occasioned by the river Tara, whose discharge into the sea is so choaked up with rushes, reeds, and other materials, that when the waters are swoln, they overflow an interior tract of more than 1500 moggie, and convert the most fertile land into a deadly marsh. Not far distant from it is a third swamp, covering about 150 moggie; and, finally, the salt-pits, when dry, send forth the most pestiferous exhalations. To this is to be added the filthy state of the town itself, and especially of the Marina, which certainly, in such a warm climate, has no less influence upon the air than the marshes themselves. A patriotic gentleman of Taranto, some years since, laid the state of these marshes before the government, and proposed that the proprietors of those tracts should be constrained either

either to open the choaked-up drain, and cleanse the Tara, or give up all claim to that part of their property; and in the latter case he engaged to render all the swamps sound, and fit for the purposes of husbandry, at his own expence, provided they were secured to him and his heirs. The court gave orders to the board of regency at Lecce to examine the affair, and an engineer was sent to survey the premises. He found the proposal excellent, and very easy of execution, but demanded 200 ducats—(£ 37. 10s.)—for his trouble in placing it in the clearest and most advantageous light; when, notwithstanding his report was as favourable as possible, it was very coldly received, and laid on one side; so that the morasses continue as before.

An account of the distribution of land in one of the most remarkable and fertile parts of the kingdom of Naples, cannot, I think, be unacceptable to the reader, especially as I can vouch for the exactitude of the following tables. The whole landed property of Taranto consists
in

in 54,449 tomolate; in which are comprised
7517 tomolate ceded to the town of Martina,
upon payment of a yearly rent. Each tomo-
late contains 1000 square paces, or rather more
than two moggie.

	Vine yards.	Olive grounds.	Arable.	Coppice.	Woods.
T.	T.	T.	T.	T.	T.
Laity	1659	4776	15,814	9585	236
Convents	108	1916	2786	1241	38
Pious foundations	—	13	40	—	—
Regular clergy	—	432	111	1220	10
	1767	7137	18,751	12,046	284

Making - - 39,985 tomolate.
Ceded to the town of Martina 7,517
Pasture ground, common to
the citizens } 3,000
Morasses } 3,947
Total 54,449

Of these 54,449 tomolate, 36,457 are capa-
ble of being made productive. But under the
article of arable land, is to be understood not
only such as produces corn, but also cotton,
hemp,

hemp, flax, and every other kind of grain; and under the head of coppice, here called *machia*, rocky and bushy pasture ground is also comprehended. It is therefore seen that the greatest part of the land is in a state of tillage; but is it not scandalous and provoking that it should be chiefly cultivated by strangers, and not by the Tarentines themselves? The latter gives themselves up in a great measure to the fishery; and in the 18,000 inhabitants of the town, a great number of idle persons must be included; there being no less than fourteen convents, and a whole army of ecclesiastics. The want of workmen at home greatly diminishes the profits arising from this luxuriant soil, the wages of foreign labourers being extremely high. The vineyards and olive-grounds, which are the chief objects of cultivation around Taranto, occupy the whole plain between the sea and the hills of Martina; but of those articles I shall speak elsewhere at full length. The third main object is corn, under which it is to be observed, that upon an average, 600,000 *tomoli* of

of wheat are annually produced; but oats and barley are much less attended to. The fourth article is cotton, which succeeds so well, and is so profitable, that in any other country it would constitute the grand object of attention. It is indeed cultivated throughout the province, and especially at Nardo, Galatone, San Pietro, in Galatini, Francavilla, Luzzano, and Brindisi; but its real country seems to be the neighbourhood of Taranto; for as that plant requires a light greasy soil, that is somewhat swampy, and retains the wet, none can be better suited to it than this. If a field, intended to be sown with cotton, has borne corn the preceding year, it must be ploughed up, or dug with the spade, immediately after harvest; which last is frequently practised, the cotton fields being recommended to be treated like garden ground. But when it has borne cotton, the ground must be repeatedly dug, until no traces of that plant are to be discovered. In both cases the ground is frequently worked during the winter; and immediately before the time of sowing, it is dug

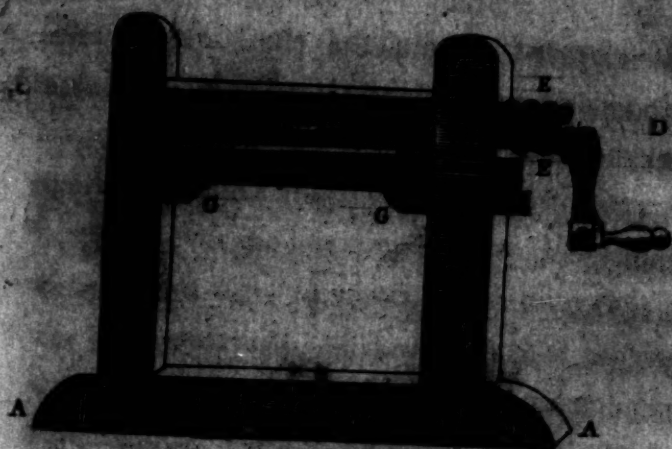
dig two palms deep, and well manured. The seed-time falls about the end of March, in dry places, and seasons; But in wet, in the beginning and middle of April; and they always endeavour to sow directly after rain. But as the cotton seeds stick together, they are first spread upon a stone floor, and after being sprinkled with water, are rubbed upon the floor, until they separate from each other. When the seed is separated, it is well mixed up with earth, and widely sown; after which it is dug in, and the ground is raked over as even as possible. Each tomoli of ground requires two tomoli of seed. As soon as the plants are four fingers high, they are thinned, so as to leave a space of eight inches between each; after which the ground is hoed, and every weed carefully eradicated; and these operations are repeated, if necessary, at the end of twenty days. When the plants are eight or nine inches high, two inches are broken off from the tops, that they may produce more blossoms, and run less into stalks and leaves. This plant

plant begins to blossom in July, and usually continues so until the end of August; during which period nothing can be more beautiful than the appearance of the field; for the greenish-blue blossoms, intermixed with a light yellow, inclining to a reddish hue, glitter in the sun with all the colours of the rainbow*. After the blossoms, appears the capsule, or pod, of a round form, ending in a point, and having generally four cells, and sometimes more, though not often, and sometimes fewer. In these cells are the seeds, which are mostly triangular, although not always of the same form, nor found in the same quantity; but at one end they are round, and at the other pointed. Each of these seeds is enveloped in a long white, delicate sort of wool, in which consists the real value of the plant. By degrees the capsules, which are here called *Noci*, increase in size, until towards the end of September, when they begin to burst, and disclose

* *Gossypium herbaceum*, of the *Linnaean* class. *Mons. Adria.*
the

the treasure they contain. Then begins the cotton harvest, which lasts the greater part of October, during which the pods are continually being. The harvest is gathered in by women, who daily break off the ripe pods, and carry them home in sacks; and if at the end of October any pods remain unripe, they also are broken off, and dried in the sun, or by the fire; but their cotton is only of a second quality. The first process after the harvest, consists in separating the wool from the seed; and this is performed by means of a machine, called Manganiella, or Scaniella, of which I have given a representation (Plate I.)—but as I did not see it at work, I fear the explanation will not be so satisfactory as I could wish. A. A. is a piece of wood, two feet and an half long, and from four to six inches thick, in which are fixed the upright posts B. B. C. C. are two cylinders, placed one above the other, so close as almost to touch. The lowest is turned by the arm D, and catches in the screw-teeth E, of the upper, so that the latter turns round the contrary way.

The



- A.A. A foot or piece of Wood, in which a cross piece is fixed in I for keeping the Machine steady.
- B.B. Two upright Posts, in which are fixed the two Glinders.
- C.C. the lowest wheel is turned by the Arm.
- D. and catches in the screw teeth
- E.E. so that the upper Glinder moves round a contrary way.
- F. A cross piece of Wood, higher at each end than in the middle, upon which run the Glinders, and which can be raised or lowered at pleasure by means of the Wedges.
- G.G.
- H.H. is a Cord stretched across from one Post to the other, to prevent the Cases from falling over.



The cotton seeds are placed between the cylinders, by whose opposite movements the cotton is taken hold of, and forcibly drawn through; whilst the seeds being too large to pass, fall over the lower cylinder to the ground. F. is a cross piece of wood, which by means of the two wedges G. G. can be raised or lowered at pleasure; and as the lower cylinder rests upon it, the space between each cylinder can be narrowed or widened according to the state of the cotton. H. H. is a cord stretched across from one post to the other, in order to prevent the cotton from falling over it; and in I. a piece of wood is inserted for keeping the machine steady. As soon as the cotton is wound off, it is sorted out; that which is destined for fine works being separated from that of an inferior quality. The former is then drawn through an iron or brass-toothed comb; a process that is here called *Pettinare*, or *Cardare*, and answers to our operation of carding. It is afterwards beaten with a catgut bow, and divided into small parcels. The coarser sort

I likewise

likewise undergoes the operation of beating. Both kinds are then either spun by hand, or with a wheel; but the finest, which is destined for stockings and mullins, is spun by hand, and cannot be exceeded in fineness. Persons of condition at Taranto frequently occupy themselves in making the stockings, which are indeed of an extraordinary degree of beauty; and costs, when of the first quality, not less than six ducats—(£1. 2s. 6d.)—a pair, upon the spot. No less celebrated are the mullins of all kinds, both plain, flowered, and coloured, for neck handkerchiefs and whole dresses, which are manufactured at Gallipoli. The inferior sort of cotton is generally spun with a wheel; and coverlets of all colours, and of singular beauty and goodness, are made of it at Nardò and Galatona. They also manufacture at Taranto, Franca Villa, and other places, a sort of Manchester, which is not indeed so fine, but more durable than the English; together with a kind of cloth called Pelle di Diavolo, and various other articles that succeed tolerably well. No
plant

plant is more profitable than the cotton; and if a proper degree of attention were paid to it in this country, many millions might be cleared by that article alone. Even when the harvest fails, which sometimes happens after long droughts, and is sometimes occasioned by a very destructive species of fly, which could not be precisely ascertained to me, the profits of the succeeding corn harvest are so great, on account of the careful tillage of the ground, as more than to repay the loss; but in successful years, each tomolata produces from eight to ten, and even twelve cantara* of cotton. In plentiful seasons the cantaro of cotton seed, covered with the cotton, fetches from seven to eight ducats—(£1. 6s. 3d. to £1. 10s.)—and five such cantara produce one of cotton, which is sold from forty to eighty ducats—(from £7. 10s. to £15.)—according to the goodness or badness of the year. Much unwrought cotton is

* A cantaro is equal to an hundred weight and three quarters.

exported; but I was not able to procure an account of the quantity. A tomolata of land, usually employed in the cultivation of cotton, fetches 1000 ducats—(£187. 10s.)—and annually brings in about an hundred—(£18. 15s.)—whereas a tomolata of olive ground, which generally contains about forty trees, with corn sown amongst them, is not worth more than 200, or 250 ducats—(£37. 10s. or £46. 17s. 6d.)—nor does it annually produce more than fifteen ducats—(£2. 16s. 3d.). The average price of a tomolata of vineyard is 200 ducats—(£37. 10s.)—but its net income is not more than ten—(£1. 17s. 6d.). The ground under the olive-trees is sown with wheat during two

* The true cotton-tree, *Gossypium arboreum*, grows also around Taranto, and usually attains the size of the *Fraxus Armeniaca* Linnæi. It has yellow flowers, and bears much larger pods than the cotton-plant. Its pods are likewise furnished with double the quantity of cotton; but it is so coarse, that the cantaro fetches twelve ducats less than the other. It is usual to mix one third of this coarse sort with two thirds of the fine, and dispose of it as being of the finest quality.

successive

successive years, and left fallow all the third year; nor is it ploughed up and resown with wheat until the following September.

Sheep, and particularly those of the black kind, are fed in great numbers upon the pastures around Taranto; amongst which the stony hills towards the north are the properest for that purpose. More attention is paid to the milk and cheese than to the wool, which is exported raw, almost every one being clothed in cotton. The capuchins, however, have two fulling mills, where they prepare the woollen cloaths for their frocks.

Several well flavoured dishes are prepared at Taranto with fresh milk; but the salted cheeses are intolerable. Hemp and flax are but little cultivated here; saffron grows wild in the bushy pasture grounds, called Machie, and is gathered in the summer; and the stony pastures, called Scirra, afford abundance of asper-shrubs, from which however very little benefit is derived. The cultivation of silk is so entirely neglected in this propitious climate,

that a single mulberry-tree is rarely to be met with; but as bees require very little care, that branch of rural œconomy is still held in esteem. Those industrious little animals collect from the aromatic herbs and shrubs, with which this country abounds, a quantity of honey, excellent beyond description, and which Horace with justice places by the side of that of Hy-mettus*.

As the fruit is here of an extraordinary degree of beauty and excellence, the Tarentines are somewhat attentive to the management of the trees, of which the following are common to all the gardens around the town.

Figs. These trees attain a height almost incredible to the northern nations. There is an innumerable variety of figs; but the earliest are the most esteemed†; whereas, with us, the

* Ubi non Hymetto mella decedunt.

HORAT. lib. ii. Od. vi. v. 14.

† Sunt præterea eadem fructus et præcoce, bifera, alba ac nigra, cum melle vindemiæque maturificata. Tarenti tantum prædulces nascuntur, quas vocant omni.

PLIN. Hist. Nat. l. xv. c. 18.

October

October fig is greatly preferred to the earlier sort. The propagation of the fig-tree is performed in the month of May, by cuttings, which are planted in a shady place, and occasionally watered; and this is deemed the best method of propagating them.

Oranges and Lemons. These trees, the ornament of most Italian gardens, are not very numerous here; for the Tarentines say that they cannot support the sea air, and therefore plant them only in such situations as are sheltered from it. I do not however remember to have heard this observation in other places situated upon the sea; and if it be true, it is singular that they should succeed so well near fresh water lakes, as may be seen upon those of Como and Garda, and the Lago Maggiore. These trees are here propagated by layers, a twig being stuck in a pot full of earth in autumn, and severed from the parent branch in May, when it has taken root, and is then transplanted. But even in this warm climate

14 these

these trees require six or eight years before they arrive at perfection.

Dates. One of these trees, in the Archbishop's garden, majestically rises before my window to the height of more than forty feet. Its magnificent crown is on all sides elegantly pendent; and figuring to myself a forest of such trees, I find it worthy of refreshing with its shade the inhabitants of heaven. Few of these trees are to be found in this country; and although they bring forth fruit, it is never so ripe as that which is imported from Africa. If it be true that the Africans bury the dates in the warm sand, in order to give them a perfect degree of maturity, the neglect of that usage is probably the reason why they do not here arrive at the requisite state of perfection.

It will easily be imagined that peaches, apricots, and pomegranates, almonds, medlars, carobs, the red and yellow azerole (*crataegus*), and all other sorts of fruit common to us, are to be met with here in great abundance.

But

But in spite of all the favours with which nature has bountifully loaded this country, the trade of Taranto extremely inconsiderable, notwithstanding its harbour ought to place it upon an equality with any commercial town in Italy. Except corn (of which there is a magazine for 150,000 tomoli), the product of the fishery, oil (every salma of which pays a duty of three ducats—(11s. 2d.)—upon entering the town), and cotton, none of which are as productive as they might be; the latter articles are not worth enumerating. I must not omit mentioning, as an object of rural economy, a plant that is much employed here by the common people, but in, I believe, made no use of in other countries; I mean the small red poppy, *Papave rhoeas* Linnæi, which is so common in every field, and whose flowers being plucked off, are heated up in a plate, sprinkled with lemon juice, and squeezed until the colour is extracted. White silk ribbons being immediately steeped in this liquor, instantly take a most beautiful colour, like that of cherry-juice.

juice. This dye fades indeed in the sun; but if prepared with other ingredients, it might probably be made capable of greater stability. Let not the reader be surpris'd at my saying nothing of the tarantula, although I am now in its native country, where there is no want of people who, as if bitten, dance about like mad men, until they fall down. Dr. Cirillo, in the sixteenth volume of English philosophical transactions, for 1770, page 233, has sufficiently proved that this spider produces no such effect as is pretended. I hope one day to receive the natural history of this insect from Dr. Manni, who assured me that he has frequently, and at various places and seasons, suffered the tarantula to bite him, without feeling the least mischievous effect. I shall close these remarks with observing, that the common people here, and particularly the women, are nothing less than ugly; that they have not only Grecian countenances, but also a head-dress, like that which is to be seen upon many medals of the Roman empresses; and
that

SECTION V.

From TARANTO to GALLIPOLI.

UPON the sixteenth of April I commenced an excursion through the province of Otranto, accompanied by Dr. Manni, in a sort of cabriolet drawn by two horses, which the narrowness of the roads rendered preferable to any other carriage. Besides my servant on horseback, we were escorted by two well armed horsemen belonging to the Duke of Martina. They serve strangers with the greatest fidelity, for a very moderate reward; and although they are almost unnecessary in this province, by way of security against robbers, they are very useful to a traveller, as a kind of recommendation of his person, and as a prevention against the extortions of the innkeepers. We travelled along the eastern coast of the Mare Piccolo, upon a rising ground covered with fig, olive, and other fruit trees, and at every step affording a ravishing prospect

prospect of the surrounding country. The villas of the Tarentines embellish not the banks of this beautiful bay, but are seated amongst the forests of luscious and melancholy olive trees. As good husbandmen their choice may perhaps meet with approbation; but certainly to them appertaineth not the praise of "*Omne tulit punctum, qui miscuit utile dulci.*" Upon quitting the water-side, the road was bordered by groves of olive trees, and fields prepared like gardens, for the cotton plant. With the view of the Mare Piccolo terminate also the cultivated country, and the district of Taranto. At the distance of eight miles from that city, we entered a *Machia*, within sight of San Giorgio, and in two miles farther arrived at Carosino, where a large ducal castle seems fast hastening to decay. The town of Oria, where we intended to sleep, is situated fourteen miles from thence; and a flat, uniform, ill cultivated country, rendered the way thither extremely tedious, until fruit trees and gardens in the immediate vicinity of the town, gave it a more cheerful

cheerful aspect. The road side was thickly covered with aloe, of which I have no where in this part of the kingdom seen so great a quantity: but I could not learn that any kind of use is here made of them.

Orta is situated upon a hill which seems placed in the midst of the plain, as it were by enchantment; and commands a most extensive prospect. A recommendatory letter from the worthy Archbishop of Taranto procured us the most hospitable reception at the palace of the

It was not until after my tour to Sicily that I was informed at Naples of Father Antonio Minassi having made a variety of experiments, in order to see if any advantage could be derived from the leaf of the Aloe. An account of them is given in the *Giornale d'Italie* published at Venice, part v. p. 246. and part vi. p. 201. But it does not appear that the ingenious monk has made as much progress as the soldiers at Palermo.

Count Borch, a Polish gentleman, who travelled into Sicily in 1777, and published an account of his journey, has inserted at the end of his work a description of the making of thread with the leaves of the aloe, entitled, "*Mémoire sur le fil de Zabbara, ou d'aloes écrit par ordre du Roi de Naples.*" In this treatise he says that the art of making this thread was brought from Spain by the Spanish soldiers. See *Lettres sur la Sicile, &c. par le Comte de Borch.* Turin 1782.

I have given a translation of his paper in the appendix, x. 4.

bishop,

bishop, whom I found a very good judge of antiquities, and possessed of a considerable collection which he formed in the province. I was particularly pleased with the earthen vases, of which he has a great number, of three different sorts; or rather three different degrees of beauty. The finest unite the most elegant designs to the most agreeable forms; and the perfection of the earth and varnish renders them not unworthy of the manufactories of Nola and Capua, where the most celebrated earthen vessels, called Etruscan vases, are said to have been made. But the number of vessels of the same kind found in the ancient sepulchres in this province, the still greater quantity of fragments of antique vases of the finest quality, daily thrown by the waves upon the shores of the Mare Piccolo, and finally, the colour of the figures, which have more white in them than those of Capua, make it probable that there was a manufactory of fine earthen ware in this province, and possibly at Taranto itself. Those of the second class distinguish themselves by the coarseness

craftsmen of the earth, and the hands of the design; for the forms of the really antique vessels, even of such as were destined to the meanest uses, were always convenient, full of taste, and adapted to the purposes for which they were intended. It is evident that these last came from Bari, where it is known that the common earthen vessels were generally made. The most ordinary, which are scarcely white, and without gloss, sufficiently prove by their shape, and the nature of the earth, that they date from the period when taste was become exceedingly corrupted. The other articles in this cabinet are of little import; which is chiefly owing to there being no one in the province who has any pleasure in collecting antiquities, or other objects of curiosity. The bishop indeed takes all imaginable pains to dissipate these dark clouds of ignorance, by forming new arrangements in the seminary at Oria, of some of which I saw the good effects; but it is difficult to triumph over the monstrous offspring of a long reign of barbarous prejudice. At Oria, which

which contains 6000 inhabitants, formerly belonged to the Dukes of Francavilla, of the house of Imperiali; but upon the death of the last Duke, the crown laid claim to his possessions. Two thousand salme of oil are annually made in this town, whose environs also produce a large quantity of corn, and much fruit of all sorts, especially cherries; and there is a considerable trade in honey and wax, which are in great estimation. The bees are kept in small oblong houses hewn out of a single block of stone, in which they thrive exceedingly.

We took leave of our friendly host upon the morning of the seventeenth, and continued our journey to Brindisi, nineteen miles from Oria. The ground is cultivated like a garden in the territory belonging to that town; but with it terminates also the industry of the peasant, although the soil is of the most fertile kind, being a mixture of clay and sand. I have frequently remarked in the neighbourhood of various towns and villages, that gardens, orchards, olive-grounds, vineyards, and common pastures,

K

which

which are either *Maolis* or *Scirra*, succeed each other in the above-named order. But if the *Scirra* or stony pasture grounds chance to extend as far as the town, no alteration is made in the above distribution; for the inhabitants are so obstinate as always to dispose of the ground according to the long established system, and never to regulate their mode of cultivation by the nature of the soil.

In the midway between Oria and Brindisi, and about a mile from the road, lies *Michania*, a place which I mention solely because the late proprietor, the *Marchesa Michania*, with whom I had the honour to be acquainted at Naples, is perhaps one of the most beautiful women that all Italy can boast. It would be difficult to find so perfect a shape united to such a beautiful complexion and such brilliant eyes. In the time of ancient Greece she would have been thought worth the destruction of Troy; and in more modern times, innumerable lances would have been broken in her honour by the gallant and adventurous knights of chivalry.

As

As we drew nigh to Brindisi we entered the regions of misery and desolation; a country, blessed with the most fruitful soil, and the most propitious climate, lies uncultivated; and the extensive remains of a ruined castle mark the entrance into the town. Broad streets with dilapidated houses, or courts o'ergrown with grass, where a miserable hovel leans against an old wall, and contains one squalid representation of humanity, conduct to several churches and convents, and a few inhabited houses, in which about 5000 persons are daily exposed to the slow but inevitable effects of a relentless fever. This is that Brundisium which, after flourishing as an independent republic, followed the universal fate of Italy in submitting to the Romans; and at the time of the Triumvirate, was the central point of those armies which were to subdue either the East or West. Notwithstanding the ambition of Cæsar in a great measure annihilated the utility of its noble port, Brundisium long continued the rendezvous of the Roman fleets, and the pass from Italy into

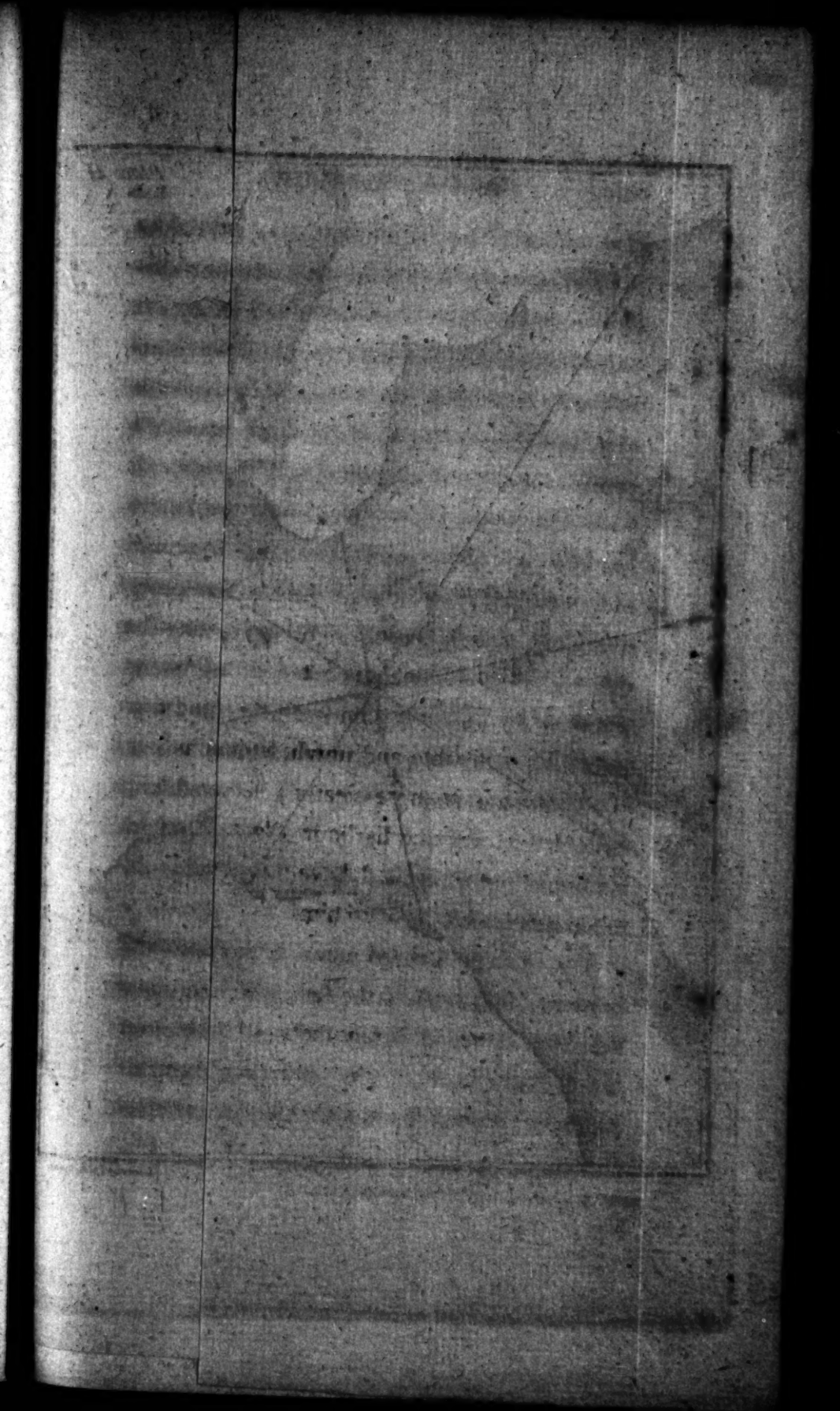
Greece and Asia; and although much of its lustre was eclipsed by the downfall of the Roman empire, its advantageous position rendered it precious to the Greek emperors, and its various possessors, and still secured a certain share of opulence and consideration. It again attains the summit of prosperity during the crusades, when Europe was depopulated by the most absurd fanaticism, and the fields of Asia were manured with the blood of Europeans; for a very considerable part of the innumerable hosts, engaged in that enterprise, assembled at Brundisium, in order to be transported into Greece and Asia by the vessels of the Italian republics. With the downfall of the house of Hohenstauffen*, under which the

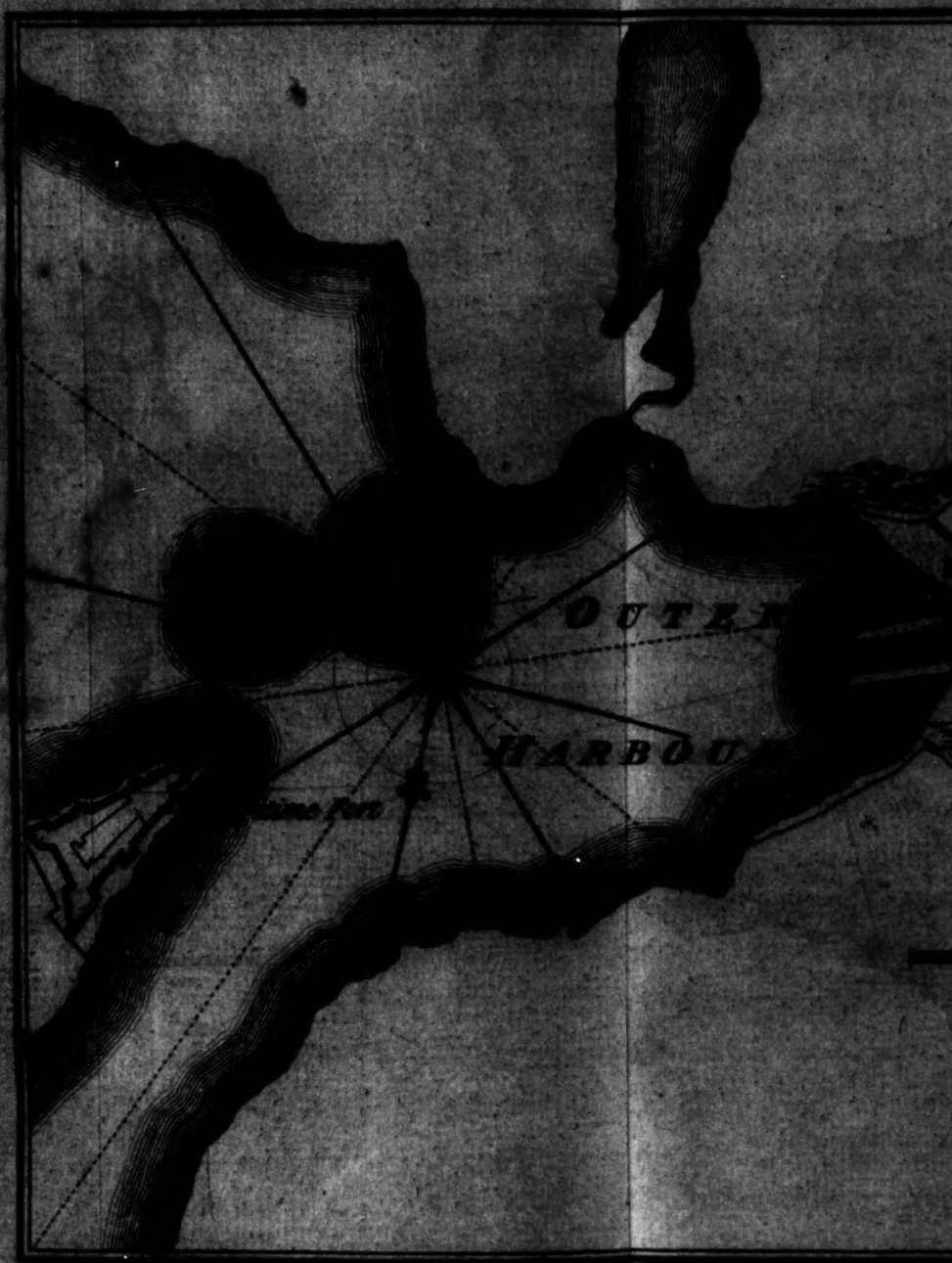
* The last representative of this once powerful house was Conradin, who perished upon a scaffold at Naples in 1268, by order of Charles of Anjou, after the battle of Tagliacozzo, in which the unfortunate Conradin was defeated, and afterwards betrayed into the hands of his adversary, the usurper of his hereditary dominions. The hill of Hohenstauffen is situated in the Duchy of Württemberg, a few miles from Stuttgart; upon it are the wrecks of feudal grandeur, which looked over a vast extent of country.

city enumerated 60,000 inhabitants, perished also its prosperity. It is true indeed that the Angevine princes and Ferdinand of Arragon made some attempts to restore it; but under their successors it would have been totally annihilated, had it not been in some measure supported by a tract of 60,000 moggie of most fertile land, producing so much oil as frequently to embarrass the proprietors by its quantity. But the total neglect of the harbour has now given birth to extensive morasses, which surround the town, and fill the air with such pestilential exhalations, that rosy health has long since deserted the country; malignant fevers now reign there throughout the year, and few inhabitants extend their miserable existence to sixty years. How then should 5,000 withered bodies cultivate 60,000 moggie of land? Where are colonists to be found who will blindly abandon themselves to death, or at least to a life of painful and incessant malady? And how can we with justice reproach the Brundusians with unheard-of indolence, because they work only four hours in a

day, and pass the rest of their time in taverns, where they endeavour to drown their misfortunes in their wine? But no one can help being surprised that the government should have hitherto shown such little desire to restore this fallen city, and render it one of the most flourishing ports in Italy, by cleansing and opening the harbour. Some years since indeed the Chevalier Pignonati, an engineer, was sent here with orders to put the harbour into a servicable state; but either through ignorance, or other causes, his operations, executed at a great expence, were so badly contrived that the town is still as miserable and unwholesome as ever. To explain this more clearly I have added a plan of the town and harbour (plate 2.), which, with many other facts, I have borrowed from a work written by Pignonati himself.

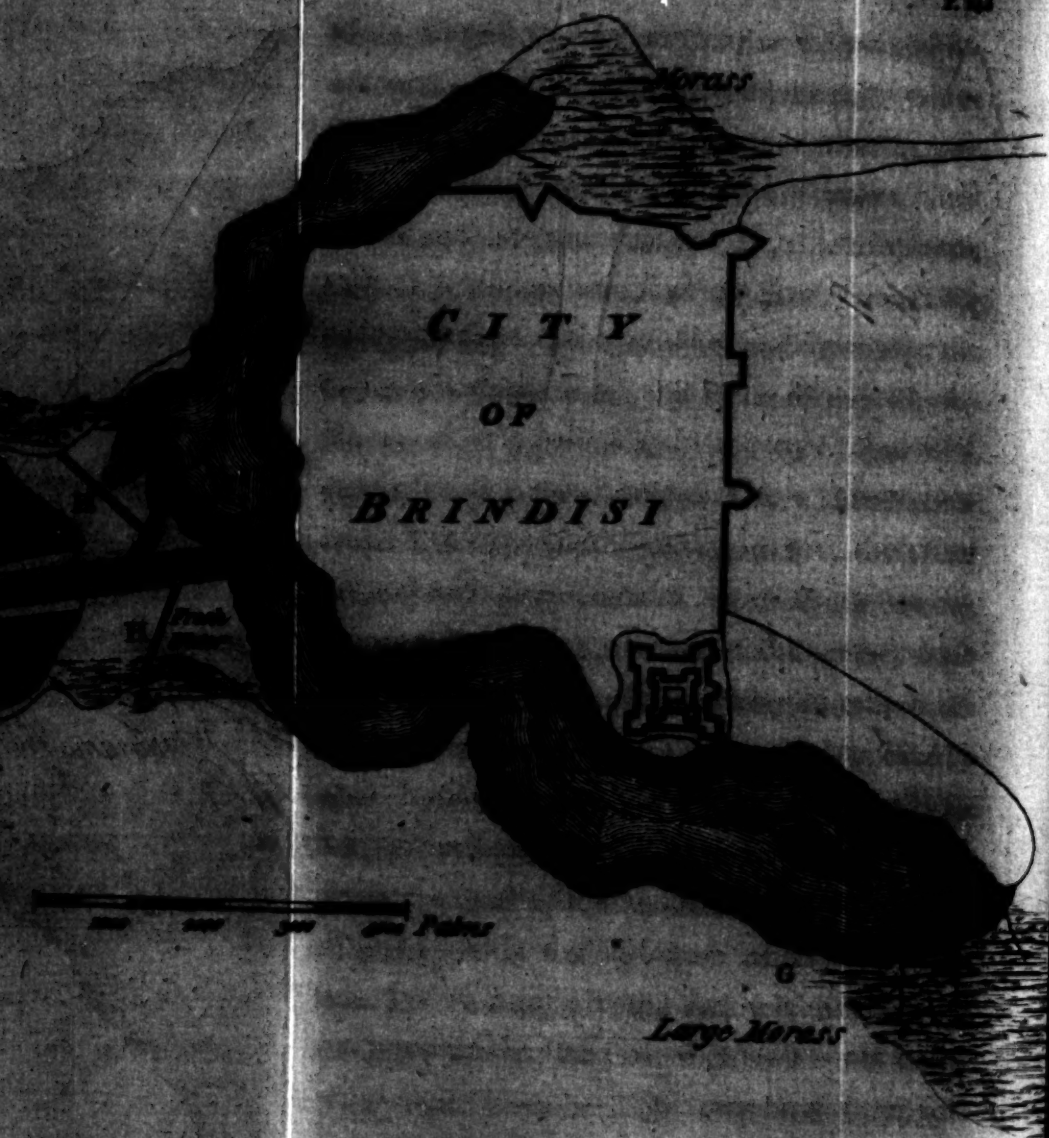
The town is situated upon a neck of land, between two arms of the sea, which compose the inner haven, securely sheltered from every wind that blows. The entrance into this haven is formed by a very narrow channel, which





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Plate II
1841



which before the time of Caesar was so much wider than at present, from A. to B. that the waves, which continually flowed in upon it from without, kept it free from sea-weeds, and drove them upon shore near the town, where they were easily collected, and carried away for the purposes of husbandry. At that time also it was wide and deep enough for the largest vessels to run into the inner harbour, which was rendered wholesome by a continual supply of water. But Caesar, who by a bold enterprise worthy of himself, was desirous of blockading Pompey's fleet then lying at anchor in the inner haven, constructed the dykes H.H. which contributed to the subsequent downfall of the town; for the Alga, so abundant in the Adriatic Sea, quickly formed these dykes into a broad shore, and would speedily have stopped up the passage, had not the rulers over the town wisely taken care to prevent it. But, after the reign of Ferdinand of Arragon, and during the administration of the Viceroy, this unfortunate city was totally neglected; and

when Pigeotti arrived there in 1776, the smallest canoe could scarcely pass from one harbour to the other, upon account of the great quantity of mud. By the stoppage of the channel, the inner haven, which in rainy seasons received much water from the neighbouring hills, formed morasses in various places, and particularly at G. and F. as also at A. and B. which infected the town with pestilential exhalations, and speedily carried off the greatest part of the inhabitants. It was therefore recommended to Pigeotti not only to render the inner harbour serviceable, but also to take such methods as might be likely to restore salubrity to the air. To that end he caused a canal to be dug from C. to D. nineteen palms deep, 2752 palms long, 200 palms wide from the great harbour to the centre, and from thence only 160 palms wide to the entrance of the inner harbour. To prevent the canal from being choaked up by the Alga, and the waves which roll in from the Eastward with great violence, he ordered two dykes to be constructed, at

at the mouth of the canal; the longest whereof was 800 palms in length, and 80 in width. In order to strengthen the sides of the canal, he caused a number of piles to be driven into the banks, and filled up behind with faggots; and, at the distance of every 200 palms, was raised a pilaster of masonry, 16 palms square above the surface of the water, and much thicker below it. These pilasters were connected by a wall, four palms thick, and were destined to support the sides of the canal. He completed his work by filling up the morasses A. B. and E. The whole expence, according to Pignonati's account, amounted to 80,000 ducats (£.15,000.), but others say that it greatly exceeded that sum. Be it what it may, it is, like many others, thrown into the sea; for scarcely twelve years are elapsed since the completion of the work, yet is the canal already choaked up with sea-weed and sand to the depth of four palms; already are the banks broken down in several places, and the inner haven is as inaccessible, and the pestilential air

as prevalent as ever. Although Fagnani may with justice complain that no attention was paid to his proposal of employing 500 galley-slaves in keeping the canal constantly clean, yet the above plan very evidently demonstrates that either he did not or would not understand his business. His canal was too narrow and too shallow, and the banks of it too negligently constructed to render the inner port of any material service, and establish a durable connection between that and the outer harbour. Neither can he pretend that he was desirous of saving money to the town, since he wanted to saddle it with the annual maintenance of 500 galley slaves, for the security of his canal. As a true patriot, and a man of understanding, he ought to have explained to his Majesty's ministers, that a very large sum of money would be requisite for connecting the inner with the outer harbour in a durable manner; and that it would be necessary either to form a very wide and deep channel, secured by substantial masonry, or give it the breadth which it had at the time of blind en

Cæsar.

Cesar. But if it be true, as I was assured at Brindisi, and elsewhere, that the outer harbour is quite as safe as the inner, being sheltered from the high winds, and a great sea, by the maritime fort on one side, and the Petagne islands on the other, I cannot conceive why so much money is unnecessarily thrown away upon the inner port. If new houses were erected between the harbours, and upon the banks of a well secured channel, which would give a free passage to the waters, every view would be fully answered. For the distance which the vessels are now forced to come from the town, renders the transport of merchandize so dear as to do away all the advantages of commerce, which is farther prejudiced by the tax of three ducats (117. 3s.) upon every ship that casts anchor for a moment in the road. If however it should be thought proper to make Brindisi a station for ships of war, the inner port would certainly be more suitable than the outer. But I can hardly imagine that it is intended to adopt for such a purpose a town which is by no means in a situation to supply materials for ship building

ing; especially when I consider that the excellent ports of Messina, Augusta, and Syracuse, are much more commodiously situated, as well for that purpose as for the protection of the Ionian and Mediterranean seas in case of a war; and surely one commercial port is much more essential than ten stations for ships of war, which cost so much, and are here of such very little use*. Having dwelled much upon this subject, which, exclusive of its own importance, serves to throw some light upon the nature of the government of this country, I shall only say a few words about the inner harbour, and then bid farewell to this devoted city.

One arm of the inner harbour is much longer than the other; for the northern branch stretches a mile and an half into the country, is 800 palms broad in the narrowest part, and measures fifty palms in the deepest; but the

* Since my return I have been informed that such is the intention of the court. Another engineer has been sent to Brindis, who means to make the canal 30 palms deep, and give it a proportionable width; so that forty-gun ships may run into the inner harbour; and all future obstructions in the channel are to be prevented by a dyke, which is to keep off the sea on the South East.

southern

southern is only a mile in length, 750 palms in breadth, and 17 in its greatest depth. The former has a muddy, and the latter a sandy bottom. The Chamacor muscle is very common in the inner harbour, as is the Pinna Nobilis in the outer; but the Brundusians not knowing how to prepare the silk, send it to Taranto. As the situation and bottom of the inner port of Brindisi much resemble those of the Mare Piccolo which produces so much money to Taranto, Pignonati caused the same sort of shell-fish to be brought to Brindisi in hopes of procuring it a new source of opulence; but they did not succeed there; and no other fish but eels are taken in that harbour. Neither could I learn any thing of the peculiar excellence of the oysters upon this coast, although Pliny relates that they were taken here, and carried to the Lucrine lake to be fattened.

* Postea visum tanti in extremam Italian partem Brundisium ostendit, ac ne his esset inter duos fauces, super cogitatum, famem longa advectionis a Brundisio compescere in Lucrinum. Plin. H. N. lib. 3. c. 54. i. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

Besides some objects of curiosity described by other travellers, the lover of antiquities will find the small collection of the Archbishop Don Otenio de Leo, worthy his attention, on account of some rare medals, some vases of an inferior quality, and a remarkable inscription, proving that Brundisium was a republic before it fell into the hands of the Romans.

Upon the eighteenth of April we quitted that afflicted city, and took the road to Lecce, twenty-four miles distant. During the first twelve miles the country consists of a thick machia, upon which pistacia lentiscus Linn.* grew in great abundance. This shrub, which the inhabitants call *relinco*, and which grows in all the uncultivated parts of the province,

* This is the mastic-tree, whose "horn-shaped excrescences," says the learned President of the Linnean Society, "have been introduced into some pharmacopœias as an article of medicine; but what their supposed qualities are, I do not recollect."

See Dr. SMITH'S Sketch of a Tour on the Continent, v. i. p. 160. A.

is used for no other purpose than fuel. My companion has pointed out to his countrymen, in the seventh part of the *Memorie Scientifiche e Letterarie*, No. 21, that the fruit of this tree, which was made use of by the Romans, affords, without much care in the cultivation, nearly as good oil as the olive-tree; that the leaves are excellent in tanning, that a very fragrant green soap may be prepared from the shrub itself, and that a diuretic salt may be extracted from the ashes; but he has hitherto preached to the deaf. In the same treatise he sets forth, and with no better success, that fenna leaves, jalop, the bark of *cinchona officinalis*, *polygala virginiana*, and the roots of the Brazilian *viola*, might be dispensed with, and replaced by *mercurialis*, *euphorbia tuberosa*, the bark of the olive-tree, the flowers of *scabiosa*, the roots of *eupatorium cannabinum*, and the seeds of *viola mammola*, which are all indigenous, and might be brought to great perfection. This province likewise affords *rhamnus alaternus*, *reseda lutea*, *ifatis*, and
crocus

crocus tinctorius, and might therefore dispense with importing drugs for dying, if those plants were properly cultivated. The soil of this wilderness is of the best kind, and fully justifies the tradition of its former extraordinary fertility. The country assumes another aspect beyond the Machia; and, in the neighbourhood of San Quinzano, well cultivated fields, and olive-trees of singular magnitude, attract the attention of the traveller. The fertility increases on approaching Lecce, near which we observed a great number of fields of flax.

Lecce is situated in the midst of an almost immeasurable plain, which is well cultivated, and strewed with a variety of villages. The town, though not ill-built, has but an uncouth appearance; and as it is large enough to contain 40,000 inhabitants, the present population of only 14,000, gives it a very melancholy air. Of these, the ecclesiastics and dwellers in convents compose by no means the least part, there being not less than thirty-six convents of both sexes; and these, poor in spirit, possess the

the fourth part of the district. The nobility are numerous and ancient, sociable and civil, but extremely poor. Lecce is the capital of the province of Otranto, and the seat of its tribunal, which consists of a president, a director of the finances, a caporuota, or counsellor of justice, a fiscal, two auditors, and an *avvocato de' poveri*, who is paid by the crown, and is to defend the causes and interests of the poor. We were recommended to the Abbot of the Benedictine convent, and were most civilly received by him and his fellow-monks, who, according to the rules of the house, are all of noble birth, or, as they are here termed, *cavalleri*. Their society was extremely pleasant and entertaining; but finding no object to detain us in this town, which affords nothing interesting, except a lace manufactory, that is supplied with flax from the environs, and the province of Basilicata, we quitted it the following morning, in order to pay a visit to Cape Finibusterræ. Close to the town we passed the quarries made use of in
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building, and consisting of hard limestone, in which I believe few or no petrifications are to be met with. The foundation of the whole province seems to be composed of this thick limestone, for it is found in digging a little beneath the surface of the earth; and upon the sea-shore it clearly shows itself, covered with a layer of calcareous tufa, that is entirely full of marine bodies.

We travelled nine miles between corn-fields, vineyards, and olive-groves, until we reached San Pietro in Galatina, a town belonging to the house of Spinola, and containing 12,000 inhabitants, who chiefly subsist by the cultivation of the cotton plant. During the twelve miles which compose the distance between San Pietro and Superfano, we found nothing but pasture grounds, succeeded by extensive forests. Upon the south-side of Superfano is a chain of low hills, being a continuation of that which runs to the northward of Taranto, and which we had passed near San Giorgio, where it is so low as scarcely to be remarked. It branches

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off

off from the great chain of the Apennines, between the provinces of Calabria citra and Basilicata, and stretching towards the east, loses itself in the sea near Otranto. The pastures upon these hills, and the forests of Superfano, support two studs that belong to the Marquis of Martina, and the Duke of Cutrignano, and furnish excellent coach and saddle-horses. Some cattle are also kept there, and I tasted some new-made goats cheese, which was extremely good. Superfano is a small, sequestered place, romantically situated between hills and woods, and has hitherto been the retreat of my ingenious companion. That young man, born in a small town in this province, studied physic at Naples with good success; but at the same time acquired such a taste for natural history, that upon his return home, he gave himself up to the cultivation of that branch of science. Regardless of the derision of his countrymen, who took him for a fool that ran after butterflies, and collected an heap of useless stones; and in spite of the difficulty of procuring the

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necessary

necessary books, he made a rapid progress in the study of botany and entomology. The rare insects which give some value to the costly work of Dr. Domenico Cirillo, in his folio *Specimen Entomologiae Napolitanae*, were chiefly furnished by Dr. Manni, who found them in the neighbourhood of the sequestered Superfano. He shewed me his collection, which, as far as I am able to judge, contains a number of insects hitherto undescribed, but of which I shall here give no account, as a *Fauna Salentina* may shortly be expected from that diligent naturalist. I shall only observe, that the *papilio rumina*, argé, and *phal. flavia*, which are either unknown, or very rare in Switzerland, are here extremely common; as is likewise the *meloe cichorii* Linn. towards which Dr. Manni has endeavoured to direct the attention of his countrymen. It remains from May to August, and especially during June and July, in astonishing quantities, not only upon the *cichorium*, but also upon the *cerealis*, *carduus*, and *cynara cardunulus*. The
common

common people have long used the liquor that distills from the insect, when the head is torn off, for the purpose of driving away warts; and Mr. Casimir Sanfo has often employed it in lieu of the common blistering drug: but to render it more generally useful, Dr. Manni made a variety of experiments, and found that forty-five grains of the meloe, and fifteen grains of euphorbium, fermented with flour and common vinegar, and well mixed up, made a most excellent blistering plaister. The proportions must be increased or diminished according to the age, sex, and constitution of the person; but the above-mentioned quantity usually produces a proper effect in thirteen or fourteen hours. These insects are collected morning and evening, and put into a covered vessel, where they are kept until they are dead, when they are sprinkled with strong vinegar, and exposed to the hot sun until they become perfectly dry, after which they are put into glass bottles, and carefully kept from humidity.

Amongst Dr. Manni's minerals I found

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nothing

nothing very remarkable, except some specimens of fossil coal, which was more of the nature of a paste, than foliaceous. These specimens were found three miles from Superfano, about forty palms below the surface of the earth, in digging wells, at a place called *Spechia de' Preti*. The strata were two palms and an half thick, and changed three alternate times with layers of martial clay, which finally formed the lowest stratum, and continued so as deep as the ground was dug. He likewise shewed me some volcanic ashes, which he had gathered up in the year 1784. at Superfano, where they fell half a line thick; and as it is known that Stromboli raged very furiously at that time, it is probable that the wind conveyed these ashes from thence. As the distance, in a direct line, is 160 Italian miles, this undeniable fact proves that the ancient describers of the eruptions of Vesuvius and *Ætna* do not deal in fables, when they relate that ashes were carried 200 and 300 miles during some great explosions of those volcanos.

Upon

Upon quitting Superfano, after dinner, in order that evening to reach Presfigia, which lies nine miles farther to the south-east, we ascended an arm of the Apennines, that exhibited a very stony soil, not producing corn sufficient for the inhabitants, but extremely fertile in oil. Upon the summit of this hill lies Russano, where the greater part of the peasants' dress consisted of a yellow woollen cloth, manufactured upon the spot, and coloured with *reseda lutea*, which not only grows wild in the neighbourhood, but is become an object of cultivation on account of its utility. From Russano we descended into a valley, bounded on the other side by a chain of hills, which commencing near Taranto, creeps along the sea-coast until it unites with that near Otranto. After passing Aquariga, we arrived at *Polisidice*, in the night; but having deviated from our original plan, we had no letters of recommendation for that place. My companion, indeed, had several friends there; but not choosing to disturb them in the night, we knocked

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at the door of a Camulillo convent, where, upon stating that we were strangers and travellers, the gates were instantly opened, and we were in the most obliging manner accommodated with a good apartment, and an excellent supper. Our arrival was no sooner known the next morning, than two substantial inhabitants announced themselves, and in the most friendly manner reconducted with us for not coming to their houses. I know not which most to admire, the hospitality of the monks, or the cordiality and good nature of these people, whose offer of mules to conduct us to the celebrated promontory of Santa Maria del Leona, we thankfully accepted, the road not being practicable for carriages. But the badness of the roads was amply compensated by the beauty of the country, which is one of the most delightful corners of the earth; not so much indeed on account of the romantic prospects which enchant the senses, as because an almost naked limestone rock is every where cultivated like a garden, and thickly strewed with towns and hamlets, inhabited by substantial

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tial and well-clad peasantry, whose countenances bear the stamp of probity and worth. Presicce is situated in the above-mentioned valley, which is in a high state of cultivation. Olive and fig-trees, of no common size, fringed the most fertile inclosures, where all kinds of corn, gardens, vineyards, hemp, and flax, diversify the scene. The stones, carefully picked from off the ground, serve to inclose the fields, and every bit of earth, not wanted in the roads, is carried to such spots as may require it; not an inch of land is untilled, and the steepest hills are planted with olive-trees to the very summits. The distance from Presicce to the Capè is no more than nine miles, and yet we passed through six villages, and saw more than twenty others, on one side or the other. The main productions of this country are oil, and wine (which last, in this district, is not sweet, but extremely good), together with tobacco, which is deemed the best in Italy. It is planted as in Alsace, transplanted in April, and gradually stripped of its leaves, which are dried in the

the shade, and placed in a heap, but never moistened. The best sort of mull is made of the points of the leaves, which are ground, after being dried in ovens. Epicurean noses reckon this mull a great delicacy; but to me, it appeared too yellow, strong, and dry. Some coarse mullins are manufactured from the cotton which is produced in this neighbourhood; and much flax is cultivated here, chiefly on account of the seed, which is exported to Venice and Trieste.

Not in pilgrimage to the miraculous image that is worshipped in the church, upon the extreme point of the Cape, did we come hither, as probably the good people of the country supposed: the idea of placing God's temple upon such a point, however, pleased me much; and the lofty chapel seemed to say to the sea, in the name of him who is there adored, "Thus far, and no farther, shalt thou go." When I reached the extremity of the Cape, my eyes traversed the wide surface of the sea, and I exclaimed to my companion,
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"The proud mountains are in sight!" I never enjoyed greater delight than upon this occasion: for my spirit raising itself over the snowy tops of the terrible *Aeroceraunia*, adjoined the cradle of the adventurous conqueror of India, and wandered through the beautiful Vale of Tempe, and over the divinely inhabited Olympus, to the birth-place of the noble Epaminondas, from whence it hastened to the ever memorable Athens, the central point of freedom, and the native country of arts and sciences; nothing but the memory of Timoleon could retain it over the proud Coriath, for Leonidas and a troop of heroes beckoned to it from the banks of Eurotas; weary with its flight, it rested upon the innocent plains of Arcadia, when a gloomy hermit awakened me out of my dream. The images of former times vanished from before me, like the *fata morgana* before the enchanted traveller upon the winding shores of Messina*. The appearance

* Brydone's Letters, and Father Minelli's Treatise, will best explain the nature of the *fata morgana*.

See also Count Borch's Letters upon Sicily, v. i. p. 45. A.

of the hermit completely destroyed the illusion; and a comparison of those times, with the now fallen and unhappy state of Greece, filled me with affliction. I turned from the sea-shore, and in a melancholy mood pursued my way back, though not without casting many a wishful look upon those distant and interesting mountains. About noon we reached Presicce, where we found a dinner provided for us by the friendly monks, of whom we afterwards took leave, and proceeded towards Gallipoli, eighteen miles from Presicce. I cannot silently pass over the ingratitude and injustice of those modern Princes, who are so little scrupulous in the suppression of convents, as to claim a right of annihilating all, because some orders are prejudicial to a well-directed government; and because others, and but too many, are totally useless to society. Some regard ought to be paid to the services which, in all ages, mankind has derived from the monastic institution; for to monks are we indebted for the cultivation of so many and such extensive

extensive wastes; and for the foundation of so many towns and villages; to them do we owe the civilization of so many barbarous nations, who, if not made happier themselves, have at least been rendered more useful to the Europeans; and to monks are we infinitely beholden for the preservation, and manuscript copies, of the admirable works of the ancients, the only true antidote against the multifarious trash of modern times. Even now the traveller, desirous of collecting useful knowledge, and exploring the paths of science, would fail in his pursuits in some of the yet half wild countries of Europe; if the hospitable convent did not receive and assist him in the attainment of his object. My journey in this kingdom has furnished me with sufficient testimonies of the proof of this assertion; nor can I deny that the persecution set on foot against the monastic orders has frequently afflicted me. Conviction is the only true road to happiness; and if a weak or gloomy mind imagine that happiness is only to be found in solitude, and if a rich man,

men, of a similar disposition, think that he fulfils his duty in providing him with a maintenance and residence. I do not see under what pretence the prince can trample upon the conviction of the one, or the property of the other. It doubtless behoves a wise regent to take care that abuses be prevented, and that nothing scandalous be suffered in the state; but this neither authorises injustice, nor the extirpation of the whole tree, because one of the branches is corrupted. I think however that methods might be adopted for the purpose of rendering the monastic orders serviceable in the present times, by entrusting them with charges worthy of religious societies, such as the education of youth, the care of the sick poor, and the reception and recovery of necessitous and ailing travellers, especially in districts at a remote distance from towns. Agriculture and the sciences would also receive advantage from the religious orders, if princes were more inclined to reform, than to destroy them.

In

In journeying towards Gallipoli, we again passed through the lordship of Aquariga, which belongs to the house of Cassano Arragona, and is one of the few in the kingdom that receive any material benefit from the proprietors. Several houses have been lately erected; and the humane conduct of the owner continually increases the number of his vassals. Upwards of 800 ducats—(£ 150)—are annually cleared here by the manufacture and sale of baskets made of reeds.

From hence the road follows the course of the valley, which is formed by the hills upon the coast, and by those which we had previously crossed. The southern acclivities of the latter are strewed with towns and villages; but except the territory of Ugento, the road traverses one continued and unprofitable machia, as far as Gallipoli. Ugento, the Ugentum of the ancients, contains some very trifling vestiges of antiquity. History tells us that several famous cities flourished in this tract of land; but the demon of desolation must have laid them waste,

waste, there being few or no traces of their existence. Sybaris, Thurium, Locris, and several others, furnish us with astonishing examples of the total annihilation of the many great, opulent, and mighty cities that once existed upon the eastern coast of this kingdom;

"Cadon le Città, Cadon gli Regni:

Sol l'Uom di cader par che si fdegaa."

Late in the evening we arrived at Gallipoli, and were received with all imaginable civility by the persons to whom we were recommended. Gallipoli is a small town, with narrow, dirty streets, containing about 7000 inhabitants, and is singularly seated upon a rock in the sea, connected with the main land by a long stone bridge. Although it has neither a harbour, nor even a safe road for shipping, it carries on a greater trade than any town in the kingdom. More than 150,000 salme of oil are annually exported; and 40,000 salme are constantly kept in the magazines, which

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are hollowed out of the rock*. The English alone annually send forty ships to this port. Gallipoli is certainly a phenomenon amongst the commercial towns, and it is inconceivable how this flourishing trade is kept up; for, first, almost all the merchants are only agents for the great houses at Naples, Genoa, and Leghorn. These agents purchase the oil of the different proprietors in the province, and either send it to their principals, or ship it off to Holland, and the Baltic sea, chiefly on board English vessels. Secondly, the importation consists in nothing but grocery, and a few articles of luxury. Thirdly; the oil is loaded with a most exorbitant tax, on exportation; for a salma, which is purchased for 20 or 25 ducats (from—£ 3. 15s. to £ 4. 13s. 9d.)—pays seven ducats—£ 1. 6s. 3d.)—to the King. Fourthly; the roads leading to Gallipoli are the worst in the kingdom; and yet the main production of the country is carried almost exclusively to that

* See the Swinburne. Vol. II. A.

place. The road for shipping too is so dangerous, that three or four vessels perish there almost every year; and yet ships are continually lying there at anchor. All these circumstances must necessarily appear singular, especially when it is considered, that the large sums raised by the provinces as road money, are not employed in places where they would be most serviceable to the King and his subjects, and when it is remembered how much money has been lavished at Brindisi, which on account of the present desolation of its territory, cannot easily be converted into what Gallipoli now is. But it is still more extraordinary, that about ten years since the merchants of Gallipoli raised a voluntary contribution for the purpose of forming a mole, which would have given some security to the road, but which has never been compleated; and that the same merchants have since in vain requested, as a favour, that they might employ the residue of the money in full execution of the plan.

The town contains nothing remarkable except

cept a manufactory of muslins, which has attained a considerable degree of perfection, and is consequently of no small benefit to the country, the cotton being spun in the adjacent villages.

I was principally induced to visit Gallipoli by the desire of becoming acquainted with Dr. Don Giovanni Presta, who has rendered himself celebrated by his experiments relative to the better cultivation of the olive-tree, and the extraction of the oil. No one will, I hope, be displeased at my relating the method in which the olive tree is cultivated, and the oil prepared, in Calabria, and the provinces of the Neapolitan kingdom. My information as to these environs is derived from Dr. Presta, and my companion Dr. Manni; and as to the other provinces, I have in part collected it upon the spot, and in part taken it from the useful publication of the Marquis Grimaldi*.

* I istruzioni sulla nuova manifattura dell' olio, introdotta nella Calabria, dal Marchese Domenico Grimaldi di Messinì. Naples, 1773, quarto, with three plates. A book of considerable merit and information.

I have already mentioned that in journeying from Naples, the olive-tree is first seen between Trani and Molfetta; and although extensive tracts of land in the province of Lecce have been entirely despoiled of that tree, the boundary must be drawn from thence. In the Terra di Lavoro, especially at Venafro and Gaeta, much attention is also paid to this branch of cultivation; but the two principalities of Calabria, and the province in which I now am, are by far the most fruitful olive countries. The plains situated near the sea, and sheltered by mountains to the North, seem to be very suitable to the olive-tree, even though the immediate effect of the sea air is prejudicial to it. A dry slope, exposed to the South, and sheltered as much as possible from winds, appears the most eligible position; and if the soil be a lightish clay, dry, and rather stony, success may be relied upon*. Upon

* *Difficile primis terra, collisque maligni,
Tennis ubi Angilla, et damosa calculus arvis,
Palladia gaudeat sylvæ virgine olivæ.*

Vian. Georg. lib. ii. v. 270.

the hills indeed they bear less than upon the rich and greasy plains; but the deficiency in quantity is compensated by the superior quality of the oil. This is exemplified in the case of the hills near Presicce, and the plain of Taranto; the former yielding less, but the oil being excellent, and the latter giving a great quantity, for the most part only fit to be used in manufactories.

The olive-tree is here propagated, either by grafting by slips, or by runners from the master

Olea maxime collibus liccis et argillofis gaudet. At humidis campis et pinguibus lactis frondis sine fructu affert.

COLUMELLA, lib. iii. c. 17.

Quod si Olivetum suo loco facere volueris, hæc genera terrarum sequeris. Terram cui mixta sit Glacies, aut Cretæ sabulosis conjunctione resolutam, aut pinguem sabulonem aut terram naturæ densiores aut humida. Cretæ siliis omnino repudianda est et uliginosa, et in qua semper humor astitit, et sabulo mæta et nuda Glacies. . . . Locus æstuosus septentrionali colle, frigida meridiano gaudet, mediis clivis delectat.

PALLAD. lib. iii. c. 18.

In calido et pingui solo radium majorem Salentinum.

CATO, lib. vi.

Spectare oliveta in favonium loco exposita solibus censet.

PLIN. H. N. lib. xv. c. 5.

roots, which in some places are called Barbatelle.

They graft upon the wild olive-tree which abounds upon the pastures, where old and half decayed trunks give reason to suppose that olive plantations formerly existed. This operation is performed between the end of March and the beginning of May; in three years fruit is produced; and this is the quickest method of producing it.

The second mode is here called Culmonare. Between November and March the branch of a bearing tree, from four to seven palms long, and from two to three inches thick, is slipped off, and put into a hole which had been dug some time before. The earth is then heaped up around the branch, within a foot of the top, in order that it may remain perfectly fresh; and in ten years it becomes a profitable tree.

The third method, here called Mazarellare, consists in planting very small shoots, at a proper distance, in ground previously prepared. They are carefully watered during summer,
and

and transplanted the third year; but it is only at the end of 13 or 14 years, that any real profit can be derived from such trees*.

I am much surprized that there should be no nursery for olive-trees in a district where that

* In Calabria the olive tree is usually propagated either by inoculating the wild sort, by runners from the master roots of a bearing tree, or by truncheons split from the roots of an old tree. At Seminara alone they observe a method, which is one of the best, and with various others was known to the Romans †. A piece of land which is neither too light and dry, nor too heavy and wet, is first prepared in winter, in the same manner as for a new vineyard, but without manure. In the beginning of the Spring the shoots that sprout immediately from the trunk of a bearing tree; and are there called *Toparelle*, are cut off in such a manner, that some of the trunk accompanies them. They are then planted in the above-mentioned ground, a palm deep, and the same distance from each other. In the first two years they are kept entirely free from weeds; in the third year they are thinned, and in the fourth they transplant the most forward trees, and so continue every year until they are all transplanted. It is singular that this easy and excellent method should be followed by only one town, and not be imitated by the neighbouring ones.

† It appears that the old writers upon agriculture were not acquainted with this method, or those before mentioned.

Sed truncis oleæ melius propagine vitis.

Respondent Vrac. Georg. lib. II. c. 63.

Melius autem truncis quam plantis alivetan conficiuntur.

COLUM. lib. III. c. 17, and lib. VI. c. 7.

tree is honoured with more attention than in any other part of the kingdom. The Prince of Francavilla had indeed established a nursery, but after his death it was suffered to go to decay, notwithstanding he, as well as the whole country, derived the greatest benefit therefrom.

In the propagation of the olive-tree, less attention is paid to the quality of the olive than ought to be shewn to that article; for here, as amongst other kinds of fruit-trees, we shall find several varieties, especially if we are governed by their different appellations. But besides that, almost every town has its own peculiar term for one and the same sort; botanizers declare that the varieties are very trifling, although the nature of the climate, and the mode of cultivation, assuredly occasion some sort of distinction. It is certain, however, that the woods and uncultivated places produce a tree called by the peasantry *Termete* and *Olivastro*, which entirely corresponds with the *Olea Europæa*, and brings forth a great quantity of fruit, which is only half the size of that produced

duced by an engrafted olive-tree. From these wild trees, when improved by cultivation, probably spring the numberless varieties, which are to be found in this kingdom, and of which Dr. Presta mentions several in the quarto edition of his "*Memoria intorno ai Sessanta due saggi d'Oglio presentati alla Maestà del Re di Napoli*," published at Naples in 1778. Amongst them he principally distinguishes only two kinds, called at Gallipoli, Ogliarola, and Cellina; from whose fruit he extracted a dissimilar oil, although he at the same time allows the difference to be inconsiderable. The former corresponds with that which the ancients termed *Salentina**; and its fruit is by far the best in quality, as well as the most common in the province; but the tree that bears it is subject to the blight, or *Brusca*. This olive is commonly nine lines long, six lines thick, somewhat curv-

* The province of Lecce is still called *Salentina*. Although few or no traces of the old town of *Salentum* are to be met with, it is very probable that it was situated near the sea between Taranto and Gallipoli.

ed, of a brownish hue, and black when it is perfectly ripe ; It weighs between 30 and 40 grains, including the stone, which is almost smooth, and weighs about six or eight grains.

The other sort called Cellina, is, after the above, the most common : but has many different appellations, as *Uliva di Nardo*, *Casciolo*, *Misciana*, and others ; and Columella is said to mention it by the name of *Oleastellum**. This olive is commonly eight lines long, six broad, and has a very light stone. At first it appears as if covered with a silvery sort of crape, but becomes quite black when it is ripe ; it yields less than the foregoing, and the oil sooner turns rancid. The tree which bears this olive, is now very generally cultivated, it

* Grimaldi enumerates the ten sorts of olives mentioned by Columella ; but amongst them I find neither the *Oleastellum* nor the *Salentina* ; which latter is however mentioned by Cato and Pliny. There seems to me to be as much confusion about the olives, as about the grapes ; but the experienced cultivators of the olive-tree, declare, what I before remarked, that the difference between the olives is by far more trifling than it is between other fruits.

being

being less subject to diseases, and particularly to the Brusca.

The process of cultivating the olive-tree consists, first in stirring the ground around the tree. This is done at the beginning of the year, when the earth is dug five or six feet around the trunk of the tree, to a certain depth, and some fine manure is put to the roots; but very judicious cultivators will not allow of the manure, and say that it is prejudicial to the quality of the oil*. Only the trees upon the hills and fallow grounds are treated as above; the earth around those upon the plains being sufficiently stirred in the tillage of the land.

* The ancients manured their olive-trees; but as it appears that they were chiefly planted in cultivated fields, the earth was stirred by the tillage of the field,

Ac tertio quoque fimo vel pabulandæ sunt oleæ. Atque eadem ratione stercorebitur olivetum, quæ in lib. ii. proposui; tamen segetibus prospicietur. Ac si ipsis tanquam modo arboribus satis servaveris; singulis stercore Caprini sex libris siccæ modii singuli vel Amureæ infingelis. Conditum stercore Autumno debet injici ut per hyemæ radices oleæ calefaciat.

COLUM. lib. vi. c. 7.

Far

Far more difficult is the next operation of pruning, which is best understood by the inhabitants of the environs of Taranto, and especially by those of Mazafra, who are universally employed. Trees that do not shoot very fast are pruned in December; and such as are planted in a very rich soil, undergo that operation in the spring. The principal rule seems to be, to suffer but few contrical branches, to let in as much air as possible to the interior of the crown, and to form it more in breadth and rotundity than in height. But I doubt whether the true principles of pruning be understood here; and indeed in some parts of this province, especially near Lecce, the trees, being never pruned at all, attain a very unusual height, and yield but very little fruit*.

* In Calabria they are not only ignorant of pruning, but are universally persuaded that he who cuts off a single branch of an olive tree merits excommunication. This is not so much the invention of superstition, as of an ill understood interest, for the purpose of preventing theft. Partly upon this account, and partly because the trees are planted near to each other, and without order, the olive-trees in Calabria

are

Dr. Presta tried the experiment of pruning and treating his trees like espaliers, with considerable success.

The olive-trees usually blossom in June. In October the fruit begins to ripen; but does not reach its full perfection until December, when the skin, the pulp, and the surface of the

are remarkably lustrous, and a forest then exhibits a solemn, gloomy sort of formery, worthy of the wild Calabrians. I was much better pleased with the trees planted in rows, and at proper distances, and though low, yet regularly pruned, that cover the Tarentine plains.

The Romans seem also to have been very sparing of the pruning hook.

*Costra, non ulla est Oleis cultura; neque illis
Procurram expectant falcem rastroque tenaces,
Cum semel haeserunt Arvis, aurisque tulerant.*

VIRG. Georg. lib. ii. v. 430.

Quin etiam compluribus interpositis annis olivetum putandum est. Nam veteris proverbii meminisse convenit. Eum qui aret olivetum, rogare fructum; qui stercoret, exorare; qui cecidat, cogere. Quod tamen satis erit octavo anno fecisse, ne fructuosi rami sub inde amputentur. Solent etiam quamvis laeta arbores fructum non afferre.

COLUM. lib. vi. c. 7.

Olivetum diebus quindecim ante Quinocetium vernum incipit putare. Ex eo die, dies quadraginta quinque recte putabis, &c.

CATO. cap. 44.

stone

stone becomes black. At that period they yield the best oil; and although in many places the olives are seen hanging upon the trees until the beginning of April, it is extremely detrimental to the quality of the oil, if the olives are allowed to remain upon the trees later than the close of December. Before the stone is hard, which takes place in August, no pressure whatever can force any oil out of the fruit. Although green in October, they are quite ripe enough for the table; and in November they assume a reddish hue, but are still too acrid to produce oil of the best quality. At that time indeed a certain sort of oil, called *Ooglio onfacino*, is extracted from them, but is only used for particular purposes. According to Dioscorides *Mat. Med. lib. i. cap. 27.* this oil was likewise prepared by the ancients, who knew how to give it a white colour, its natural one being a greenish yellow. It was by them considered as the best oil; but they must have possessed a method of preparing and colouring it, which is now lost; for notwithstanding Dr.

Presta

Presta has with infinite attention tried every method of making it, the oil has always turned sharp, and been of a greenish yellow colour. The *Oleum strictivum* of the ancients was prepared from olives, which having attained a middle state of maturity, were neither green nor black, but spotted in a very particular manner. In some of the environs of Taranto, they wait until the olives fall to the ground, before they gather them; so that the harvest lasts from the end of October until the end of March*. But at Taranto

* The ancient inhabitants of Italy were much more attentive to the mode of gathering the olives, than the moderns. The forty-ninth chapter of Columella's 3^d book will teach, as well the method of gathering the olives, as that of making the oil.

Olea ubi matura erit quam primum cogi oportet, quam minimum in terra et in tabulato esse oportet. In terra et in tabulato putrescit. Legali volunt, ubi *Olea* caduca quam plurima sit, quo plus legatur. Factores ut in tabulato diu sit, ut frasca sit quo facilius efficiant. Nolite credere, oleum in tabulato crescere posse. Quam citissime conficies, tam maxime expediet; et totidiem modis collectæ plus olei efficiant et melius. *Olea* quæ diu fuerit in terra aut in tabulato, inde minus fiet olei et deterius. Oleum si poteris bis in die depleto; nam oleum quod diutissime in Amorcea et in frascibus erat, tam deterrimum erit.

CATO. cap. 64.

I copied

itself, where the management of this useful and profitable fruit is better understood, the olives are gathered in December with the greatest care*, and heaped up in cellars, until it be convenient to press them. As very few individuals have an oil-press, and as in the baronial towns the lord has generally the exclusive right

I copied the above passage, not only because it contains advice about choosing the olives, but also because it censures the bad customs now prevalent in the oil countries, relative to the fermentation of the olives.

De Oliveto, Oleam quam manu tangere possis e terra, "ac scilicet, legere oportet potius, quam quatere, quod ea que vulsavit," macescit, nec dat tantum olei. Quæ manu tangi non poterant, ita quasi debent, ut arundines potius quam periculi feriantur. Qui quatit, ne adversam cadat; saepe enim ita percussa olea secum desert de samulo plantam; quo facto, fructum amittunt posteri anni; nec hæc non minima causa, quod oliveta dicant alternis annis non ferre fructus, aut non æquè magnos.

VARRO, lib. i. c. 55.

* In Calabria, the olives are not only suffered to drop off, but are not picked off the ground until June, as I had once occasion to remark upon the second of that month. By this negligent practice, the olives not only half rot upon the ground, and yield a small quantity of very bad oil, but, as much fruit still remains upon the trees, it often happens that the crop of the ensuing year is lost, and the trees consequently yield only two crops in three years.

of

of possessing one, of which his subjects are constrained to make use, they are frequently obliged to wait so long before they can extract their oil, that the olives necessarily fall into a state of too great fermentation, which is succeeded by putrefaction; and this is one of the principal causes of the general badness of the oil*. The Duke of Martina has indeed constructed magazines for olives, arched over, and contiguous to his presses, upon one of his estates, called Casalerotto, where he has 900 moggie of olive plantations; and the olives are well preserved

* The Calabrians have two methods of ascertaining the proper season for pressure; the first consists in a man thrusting his naked arm into the middle of the heap; if the arm, when withdrawn, be covered with a white juice, the fruit is fit for pressure; but if the juice be reddish-coloured, the olives are left to ferment. The other method consists in making a heap of nine tomoli of fruit, and suffering it to remain untouched until it diminishes to seven and an half, when it is supposed to have reached the highest pitch of perfection; and the Calabrians, who otherwise are not deficient of understanding, are religiously persuaded that the seven tomoli and an half of rotten olives yield more oil than nine tomoli already over-ripe.

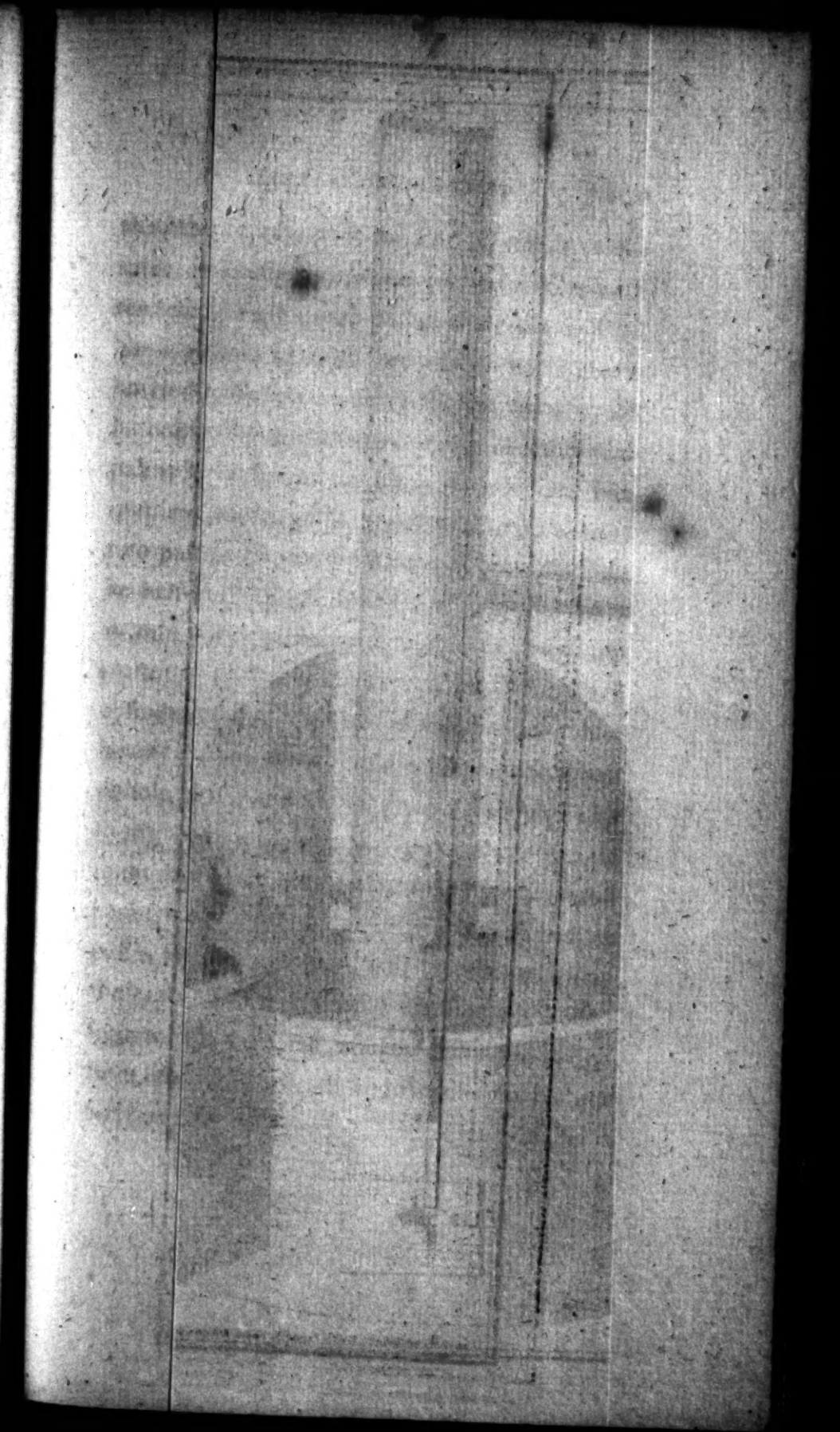
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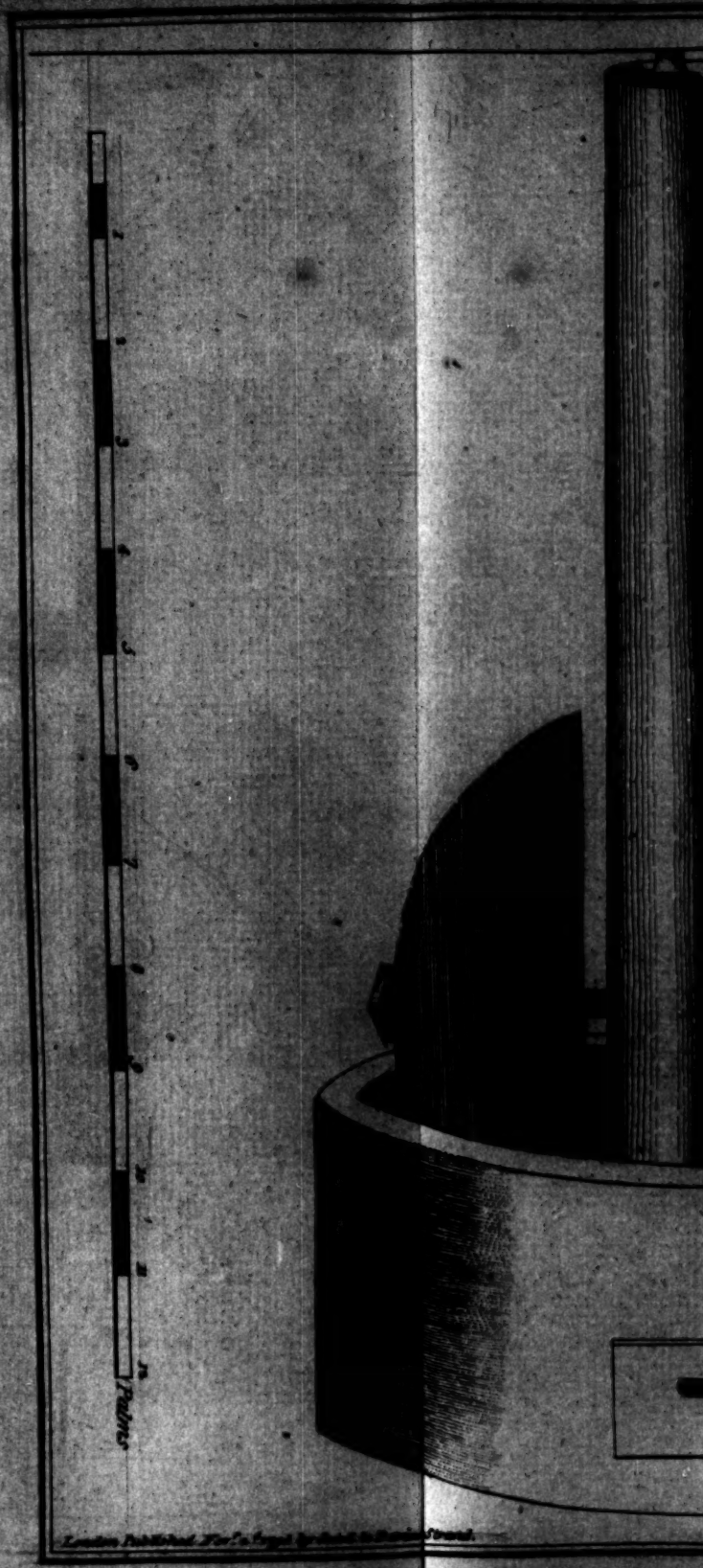
therein;

therein; but such expensive works can only be undertaken by very opulent proprietors.

The oil-mills, called *trappeti*, are of two kinds; one which has been in common use for a long period of time; and another that was found in the overwhelmed town of *Stabia*, and has been improved by *Lavegha*. The first consists of a solid piece of limestone, or marble, fashioned like a mill-stone, seven palms in diameter, and two in thickness; this vertical sort of wheel is placed upright upon a round, flat stone, from six to seven palms in diameter, which has a raised border, and is fixed upon a pedestal four palms high. From the bottom of this stone rises a moveable cylinder, from which an axle extends into the centre of the upright stone, in such a manner, that it can turn round, as in the nave of a wheel. An ass being harnessed to a bar, that stretches also from the cylinder across the wheel, gives motion both to the cylinder and the wheel, whose weight crushes the olives upon the stone beneath. Of

the





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the other machine, which was found under the ruins of Stabia, and has been improved and rendered fit for present use by Lavegha, I have given as correct a representation as a hurried drawing would permit (See Plate III.) It consists of a round pedestal, four or five palms high, in which is fixed a concave hemisphere, of lava, or other very hard stone, two palms deep in the middle, and seven and an half in diameter, including the brim, which is one palm and an half broad. From the centre of this hemisphere rises a moveable cylinder, whose upper end is let into a cross-beam, in which also it moves around. At a certain distance from the lower end, a very strong iron axle passes through the cylinder, upon each side of which a piece of lava, of an hemispherical form, is placed, so that the axle passes them far enough for nuts to be fixed at the ends of it, in such a manner, that the two segments may be moved at pleasure, to or from the cylinder. The convexity of these segments, which, when united, are four palms

in diameter, exactly coincides with the concavity of the mortar, from which the segments can however be withdrawn by means of the nuts. In the space between the segments are two iron instruments, of which one is inserted in either stone; the one is in the form of a sickle, and keep the olives under the segments; and the other scratches off the thick pulp that adheres to them. A hole is cut through one side of the concave stone, and furnished with a cork, which, when the olives are sufficiently crushed, is drawn out, and the motion of the machine forces out the pulp; when fresh olives are thrown into the mill. The advantage of this oil-mill over the other, consists in its requiring fewer hands, and in shortening the time of grinding. For with the common machine, one man is constantly employed in replacing under the mill-stone such olives as fall out, and in taking out the pulp, before he can put in fresh fruit. Somewhat less oil is perhaps produced by Lavegha's mill; but this defect is amply remedied by the superior quality of the oil;

for

for as his mill possesses the peculiar advantage of crushing the olive without grinding the stone, the oil is free from that raw and acrid sort of taste, to which the oil produced from the other mill is but too subject. In short, its numerous opponents can reproach it with nothing but being of more expensive construction; for their other objections, that it yields much less oil, and that their forefathers always made use of, and were satisfied with the common one, can have but little weight with reasonable people. And with respect to the expence, it is indeed certain that the Duke of Martina expended a large sum in the construction of his mills at Casaleretto, for which he caused the lava to be transported by sea from the foot of Mount Vesuvius to Taranto; but it is not necessary for every one to follow the example of that opulent nobleman, especially when it is known that the neighbouring mountains of Calabria abound in stone as proper for the purpose as lava * & †. As soon as the olives are suffi-

* The oil mills in many parts of Calabria are still in their
N 3 in-

ciently crushed, the pulp is put into a cylindrical sort of straw baskets, called *fischlioli**, placed one upon another, under a press, that is worked by four or five men. When the oil is done running, warm water is thrown upon

infancy, being nothing more than a hollow piece of wood, in which the olives are trodden with the feet;—the present customary method in the states of Morocco! But at Seminara, and in places where ignorance and wildness are not quite so flourishing, the oil-mills resemble those in the province of Lecce. Grimaldi made many attempts to improve the oil-mills and presses; but I fear that he has had as few imitators as the Duke of Martina.

† The description which Cato gives of the oil-presses used in his time, and which Meistert has so ingeniously explained, in his treatise published at Göttingen, in 1764, "*De Tortulario Catonis vasis quadrinis*," induces me to think, with Dr. Presta, that they were of the same kind as those found in the ruins of Stabia, and which have been described by Lavegha.

* In Cato's time the *fischlioli* were also in use, but were not made of straw. *Ad oleam cogendam, quæ opus erant, parantur. Vincina matura salices per tempus legantur, uti sit unde corbule fiant, et veteres sarciantur. Fibule unde fiant: Aridæ illiguntur ulmæ nucem sculnæ face, uti in stercus aut in Aquâ cojiceantur. Inde ubi opus erit, fibulas facito.*

CATO, cap. xxxi.

the

the baskets, which undergo a second pressure. The oil is received either in wooden or earthen vessels, out of which it is poured into a deep brick cistern, where it is usually well preserved.

Gallipoli is the great magazine of the oil made in this province; and I have already mentioned the quantity of which that town annually disposes. The merchants there collect it from the inhabitants, at the annual average price of from twenty-two to twenty-five ducats—(from £4. 2s. 6d. to £4. 13s. 9d.)—a *salma*. The best oil is exported to England and Holland; and the Genoese purchase the worst, together with the dregs, for their soap manufactories. I could not with any precision learn how many *salme* of oil are annually made in this province; but as I was assured that a tree in full vigour annually yields ten tomoli of olives, and that each tomolo seldom produces less than one *staia** of oil, the amount must

* A *staia*, or *star*, is equal to two English pounds. Sixteen *stars* make a *salma*, which contains about forty English gallons. A tomolo is about eighty pounds English.

necessarily be very great, particularly when we recollect that the immeasurable plains between the Ionian sea, and the hills behind Martina, are one continued forest of olive-trees*.

This useful tree is subject to various enemies and diseases, for a sharp wind in the spring frequently robs the cultivator of all chance even of a moderate crop; and a disease here, called *la Brusca*, corresponding with our

* Grimaldi says, that, in a good year, 200,000 tomoli of olives are gathered at Seminara alone. These produce about 90,000 cask of oil, each weighing 430 ounces, and fetching a ducat and an half—(5*l*. 7*d*. 1*h*)—upon the spot. As it is calculated that the well cultivated district of Seminara produces the tenth part of the olives in the whole province, it follows that in Calabria Ultra are annually gathered two millions of tomoli, which yield above 800,000 cask of oil, worth 1,200,000 ducats—(£ 225,000.)—a vast sum for one single article—which might however be nearly doubled by more judicious management. Messina was formerly the staple for the Calabrian oil trade; but the English and other vessels now cast anchor in the different bays, and purchase the oil of the inhabitants. The bad oil, which from the negligence in making, amounts to almost the half of what is exported, is principally carried to Marseilles, and used in the soap manufactories there.

blight,

blight, is peculiar to the ogliarola, which it usually attacks in October and November, when the leaves appear as if burned, and fall off, together with the fruit. They are also extremely subject to a disease which effects the bark, and by which the stem and branches become so full of scurf that the tree perishes by degrees.

Three sorts of insects have been mentioned to me, but not exactly ascertained, as prejudicial to the olive-tree. A kind of cicada, not to be found in Linnaeus*, nestles in the blossom, and envelopes itself in a sort of froth, like that of the spumaria, so that the process of bearing is considerably impeded, and the tree consequently produces much less fruit. This insect either nourishes itself with part of the fruit, or glues up the passages, so as to hinder the setting of the buds.

A chrysalis is also sometimes found in the stone, and afterwards turns to a tineæ. And,

* Perhaps this insect is the cicadula of Ray, called by Swammerdam, locustæ pulcræ. A.

lastly,

lastly, a chrysalis is found in great abundance in the wood, which it devours so that the trees are materially damaged. I could not discover whether it produced a dormestes, or a curculio, and only that it was a sort of chaffer*. I have persuaded Dr. Manni to examine all these insects with the greatest attention, and to communicate the result of his observations to the world †.

The olives are eaten here, either green or black, as frequently as in France, and the northern parts of Italy. They are kept in salt

* *Amurca* valentibus infundenda est; nam ejus per hyemem si vermes atque alia suberunt animalia, hoc medicamento necantur. Plerumque etiam locis siccis et humidis arbores musco infestantur, quem nisi ferramento reseceris, nec fructum, nec latam frondem Olea inducet.

COLUMELLA, lib. vi. c. 7.

† The accidents and enemies to which the olive-trees in Calabria are exposed, are the heavy torrents of rain that fall in May and June whilst they are blossoming; the hoar frosts in the mountainous parts of the province, and a worm (probably a chrysalis) which is found in the olive, and makes it rot, and fall off before its time. It is not yet ascertained whether it be a fly that lays its eggs in the fruit, as the Calabrians imagine, or whether it be an insect in the trunk of the tree.

• water,

water, and eaten either raw, or roasted in the ashes; and the convents make great use of them in lent*.

This is all I have been able to collect relative to this subject, and for which I am principally indebted to Dr. Presta, whose patriotic zeal has led him to make a variety of expe-

* The Romans appear to have been very fond of olives. Horace frequently mentions them; and Colomella gives us an ample account of the mode of preparing and keeping them, in the 46th and 47th chapters of his thirteenth book. *Oleas albæ quemadmodum condiantur. Antequam nigre fiant, contundantur et in aqua dejiciantur; crebro aquam mutes. Deinde ubi satis maceratæ erunt, exprimat et in acetum conjiciat, et oleum addat et salis seilibram.*

CATO, cap. cxvi.

Oleas esui optimè condi scribit Cato, orchites et pausæ aridas. Si sale sint conficatæ, dies quinque, et tum sale excusso, biduum si in sole positæ fuerint, maxere idoneas solere; easdem sine sale in defrutum condire.

VARRO, lib. i. cap. 60.

Amongst the several methods mentioned by Palladius, lib. xii, cap. 22, I shall choose only the following:—*Columbæres olivæ sunt sic. Alternis cratibus olivarum pulvum spargis et mel et acetum et sales modice stratura intercedente suffundes. Item sternes olivas super furculos fraxiculi vel aneti sive lentisci, et ramis olivæ subditis aceti heminam et muriam suffundis, et has construtiones usque ad yasculi plenitudinem patieris insurgere.*

riments,

riments, tending to perfect the cultivation of the olive-tree, and the management of the oil. He collected every kind of olive, which he pressed in their various stages of maturity, and found that the Ogliarola and Cellina, gathered and pressed in December, yielded the best oil. He also made several trials about keeping oil, and actually kept some during eleven years, without it becoming rancid: but he assured me that it was always best in the first year, and that it annually lost something of its goodness. He likewise suffered some uncorked bottles of oil to remain some time in the sun, where it became rancid, but not thick*. He says that

* The following passages shew that the Romans put salt into their oil, at the time of pressing the olives.

Postea resolutis corticulis emoli dehibent, adjectis binis seltariis integri salis in singulos modicos. Quod si frigoribus oleum cum amara congelabitur pisculo sale cocto utique utendum erit. Ea res resolvit oleum et separat ab omni vitio. Neque verendum est ne falsum fiat. Nam quantumcumque adjeceris salis, nihilominus saporem non recipit oleum.

COLUMELLA, lib. xiii. c. 49.

Greci in conservandi olei præceptis ista jusserunt. Tantum legende esse olive quantum nocte veniente possumus exprimere

perfectly good oil ought to be transparent, of the colour of a ripe lemon, and have the taste and smell of the olive. The oil which he gave me was as good as the best that I ever tasted from Provence or Monaco. It is to be lamented, that the inhabitants of this province do not follow the example of this worthy and useful patriot, and recommend him to the encouragement and protection of the government.

Having seen every thing worth attention at Gallipoli, we left it upon the afternoon of the twenty-first, and travelled nine miles to Nardo, upon a very bad road, and across a rocky waste, which, at the distance of a few miles from that place, was succeeded by corn-fields

mere molam primo oleo debent leviter et suspensam; ossa non contracta fordescunt, quare de solis carnibus fit prima confectio. Salignis canistros fieri debere virgultis, qua genus hoc oleum dicitur adjuvare. Nobilius erit quod sponte defluerit. Sales deinde ac nitrum jubent novo oleo misceri, ut hæc res spissitudinem ejus absolvat. Deinde cum acetate subsederit oleum purum xxx diebus exactis in vitros vacas transferri.

PALLAD. lib. xii. c. 17.

The same author says, that rancid oil may be made sweet by the help of salt,

and

and plantations of fig-trees. That town, which is well inhabited, belongs to the powerful family of the Counts of Conversano, and carries on a considerable trade in cotton and snuff. The former is chiefly sold raw to the English, who carry it home, and after dying it, resell it to the same inhabitants at double the price. In a country where such extensive tracts of land lie uncultivated, and where plants proper for dying grow spontaneously, it is singular that no one should have ever thought of avoiding the loss attending such great outgoings, by the establishment of dye-houses. At Nardo are made those famous cotton coverlets, which are exported to all parts of the world, and bring in a considerable revenue to the town. As I had no opportunity of visiting the workshops where those coverlets are made, I must conclude by generally remarking, that if the cultivation of cotton, and the manufactories of Nardo, Lecce, and Gallipoli, were properly attended to, they alone would suffice to put this province into a most flourishing situation.

The

The preparation of snuff is here somewhat different from that at Capo di Leuca; for after the tobacco is ground, it is exposed in an open vessel to the evening dews; and as soon as it has absorbed a sufficient quantity of moisture, it is packed up, and sent away.

Plantations of olive-trees abound also in this neighbourhood, and I found that almost throughout this province the ground is let to the peasantry for four years, on payment of half the profits. If the soil be very fertile, and well cultivated, the tenant is charged with the taxes imposed upon the land; but the proprietor pays them, if the soil be of an indifferent quality. The olive-trees upon these estates are taken care of by the tenant, but the fruit belongs wholly to the landlord, and the tenant has only the privilege of purchasing it, at a fixed price, in preference to others. An olive plantation is here formed at little or no expence to the proprietor, who lets the ground to the peasant, upon condition that the plantation shall be perfect at the expiration of a certain

tain number of years, and that it shall be managed according to the will of the proprietor. The farmer meanwhile enjoys the land, either rent free, or upon the payment of only one third, or fourth part of the profits; but as soon as the trees begin to bear, the fruit belongs to the landlord.

Upon the morning of the twenty-second we quitted this industrious town, whose well cultivated territory is terminated by a thicket, through which the road winds during fourteen miles. It belongs partly to the Counts of Conversano, and partly to the proprietors of the duchy of Francavilla; and I could not help regretting that such a tract of land, whose soil consists of a rich red clay, mixed with sand, should, in such a situation and climate, be suffered to remain in so unprofitable a state. With pleasure we arrived at Lavetrana, a small town belonging to the above-mentioned duchy; but as it offered nothing remarkable, we proceeded six miles farther to Casalnuovo, the Manduria of the ancients, where the late Prince of Francavilla

avilla had begun to build a magnificent palace, which will probably remain unfinished, his property having lapsed to the crown. As several books had taught me to look for various remains of antiquity at this place, I visited them in the company of an obliging inhabitant of the town, and first examined the old walls and ditches, of which there are very considerable remnants. The walls, which formed a quadrangle, of no great extent, were composed, like those of Syracuse, of large blocks of stone, in tolerably regular courses, without cement; and the ditches appear to have been on either side protected by a wall. We next proceeded to a chapel, to this day called San Pietro Mandurino, near which are subterraneous vaults, that served either as baths, or reservoirs for water; but they do not bear the stamp of very high antiquity, and are in no respect worthy the attention of the traveller. With more satisfaction did I descend into a neighbouring cavern, formed in a limestone rock, probably by the hand of nature. It is about twenty-four

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feet.

feet in diameter, and ten feet high, and in the centre rises a spring, which my Cicerone assured me never augmented or diminished. This grotto is called the Bath of Venus; and the people still entertain a certain degree of veneration for the spring, and carefully cover it with a stone.

I afterwards visited an ecclesiastic, who has a small collection of vases, called Etruscan. In form and fineness of clay they were equal to the best productions of Capua; but the design of the figures demonstrated the decay of taste.

After this visit we proceeded two miles farther to Nava, where we were expected by the superintendent of all the royal possessions in this neighbourhood. The country is tolerably well cultivated; and the village itself formerly belonged to the jesuits, upon whose suppression it was seized by the crown. As it contains nothing remarkable, we took leave of our friendly and intelligent host the following morning; and after a journey of four hours,

over

over an indifferently uncultivated tract, reached our old quarters at Taranto, where we found Sir William Hamilton, his Britannic Majesty's envoy to the court of Naples, with a very agreeable party of friends.

The erudite accomplishments of that minister are too well known, to derive any additional lustre from my commendations; but I cannot help contributing my share of admiration and praise to the noble qualities of his heart, the solidity as well as brilliancy of his understanding, and the superior excellence of his taste, of which my acquaintance with him has enabled me to form a very adequate idea.

As an enquiry into the baronial rights was one of the principal objects of my excursion into this province, I shall now communicate what I collected in different places upon that subject, with which I was unwilling to interrupt my narrative. It is essentially necessary to observe that the king here represents a double person;—as sovereign of the whole nation—

and as baron, or private proprietor of lordships and estates. As it is the law of the country, that the crown is heir to all barons who leave no relations; but such as are beyond the third degree, possessions are continually falling in to the king, who enjoys them with all the rights of a baron; and it is painful to me to remark, that those estates go to decay as soon as they fall into the royal hands. In order to make this appear, I must first explain the nature of the baronial rights, and then disclose the causes of decay.

The barons in the Terre di Lecce have—first—the criminal jurisdiction in their lordships, where they take cognizance of the whole process, and can condemn to death. The accused has indeed a power of making a variety of appeals; for he may first appeal to the tribunal of the lordship, of which however the judges are nominated by the lord; and in some places there is a privilege that he may again appeal to any one judge to be appointed by the baron in his lordship. From the baronial
tribunal

tribunal he may appeal to the supreme tribunal of the province, which consists of the governor, who has no vote, of the fiscal, the capomorta, the avvocato dei poveri, and two lawyers. From thence the appeal lies to the vicaria at Naples, and finally to the royal council of state. No one will be surprized that the retainers of the law should find their account in this long succession of appeals, which exists also in civil causes, to the great impediment of justice. For there likewise the baron takes the first cognizance, and has one or two appeals, which indeed only take place in affairs of small import; the rest following the same course as in criminal cases.

The third baronial right is the tenth of every thing growing within the limits of his lordship.

Fourthly: In every feudo or lordship, the baron has the exclusive right of possessing an oven, an oil-press, a mill, a butcher's shop, and an inn; and in some places, even the fountain

is the property of the baron; and all these are let by auction to the best bidder.

Fifthly: Some barons are entitled to road and bridge money, although the former are the worst in the world, and the latter are in a most dilapidated state.

Lordships situated upon the sea-coast possess also various rights of anchorage, salvage, fishery, and the like.

Finally: Nearly all possess the privilege, invented during the barbarous ages (and here called *cuneatico*), of enjoying every bride during the first night of her marriage, but although this is no longer required *à la lettre*, a certain sum of money may be demanded in lieu of it.

Besides these privileges, the baron has his own private possessions in the lordship, which he usually farms out for a third, or one half of the profits.

They also possess extensive tracts of woodland and pasture ground, upon which they generally form studs, sheep-walks, and dairies.

All

All these rights, privileges, and casualties belong to the proprietors of the lordships; namely, to the king in his baronial capacity, to the nobility, the archbishops and bishops (upon whom whole lordships were liberally bestowed in former ages), and to the monasteries, to which also a great many appertain.

When it is considered that the subjects of these lordships likewise pay no small taxes to the crown, their condition will not appear the most enviable. But this admits of some exception; for where the proprietor continually or generally resides upon his estate (as was very much the case about forty years since), and is at the same time a man of understanding; or where the fixed superintendant of the estate follows the orders of a mild and prudent baron, the subjects are generally in a very comfortable situation. With pleasure I recall to mind several such districts, where every countenance displayed the signs of contentment, where agriculture was upon the very best footing, and where various manufactories had attained the

highest degree of perfection. It is true that the proprietors administered justice most impartially, that they seldom made any use of their privileges, and in general contented themselves with their tenths; at the same time that they formed many public or other useful institutions, spent their revenues upon the spot, and by their conduct gained such universal esteem and goodwill, that many unhappy families flocked to them from other lordships, and were received with kindness, and a ten years exemption from the payment of the tenths. Such noble-minded barons still remain in the kingdom; and although they do not reside upon their estates so frequently as formerly, they pay frequent visits to them, or keep them in a prosperous condition by means of their stewards. Striking indeed is the difference between a flourishing baronial town and a royal one, or such as does not belong to a baron. These are chiefly committed to the care of a governor, who is usually of a poor or decayed family, receives no salary from the king, and either enriches himself in
his

his post, or becomes quite a beggar; for as the town gives him but a very trifling salary, he must of necessity maintain himself as he can; and there are instances of such governors being confederates with smugglers and banditti. Besides that, the king draws a variety of duties from these towns, the inhabitants are forced to pay an annual tax to the town itself. In short, the sum actually paid every year by an inhabitant of a royal town, exceeds what a baronial subject would pay to his lord, even were all his rights exacted. But if the baron be an oppressive and unthinking master, or if the steward be a worthless servant, the condition of the subject, and of the estate, is, indeed, so much the more pitiable. For the poor subject can not only with difficulty bear all the pecuniary charges with which he is burthened, and which are extorted from him in the most oppressive manner; but his complaints against injustice are useless, since his lord is the judge, and an eternal succession of appeals leads only to uncalculable expences. Such a tyrant is, indeed,

indeed, finally punished in a manner that has terrified many from similar proceedings. For as the subjects are not *glebæ adscripti*, and the baron has only in a few places the right to the tenth of the moveables and immoveables, they are at liberty to leave the territory, and emigrate to a milder government; so that many estates have been depopulated, and the proprietors nearly ruined.

Formerly, and when the barons constantly resided upon their estates, this seldom happened; for they were too well acquainted with their interest, not to keep their estates in a flourishing condition, and too moderate in their expences to have recourse to oppressive expedients to gratify their wants; but since they have begun to relish the pleasures of the metropolis and the court, and bartered their venerable old castles for modern houses of cards, and the manly diversion of hunting, for senseless games of chance, and for gilded carriages, in which they parade up and down the streets, in lazy dissipation of their time; and since in
lieu

lieu of the hospitable table, where the noble actions of their worthy ancestors were circulated with the glass, their evenings are now passed in theatres, filled with pestilential vapours, where the nymphs, devoted to prostitution by their voluptuous manners, dress, and conversation, enervate the minds of well-descended youth, and transform the descendants of many a valiant knight into painted monkeys and senseless chatterers; the iron chests are no longer filled with gold, and the treasure is replaced by accumulated lists of debts, for which the income of future years already is engaged. The education given to the young nobility in the capital, where they are exposed to such vicious examples, creates in them a decided aversion to the tranquil innocence of a country life, and gives rise to a variety of imaginary wants, and unheard of expences, which force them to oppress their subjects, who, if properly encouraged by the occasional presence of their lords, might soon be doubled, and, by a little better management, the estate put in a condition

tion to answer the extraordinary expences of the proprietor. Such also is the cause of the decay of the royal lordships in the province of Lecce, and probably in other parts of the kingdom. Under the Prince of Francavilla, who was a nobleman of singular qualities and attainments, these lordships were in the most prosperous condition; for he not only governed his subjects so mildly, as in a short time to double the population of his estates, but encouraged them to the improvement of agriculture by a variety of rewards, formed new colonies, and built villages, converted large tracts of woodland and common pastures into arable land, and instituted schools and manufactories. The better to accomplish his benevolent designs, he frequently resided upon his estates, and animated every thing by his presence—until death put an end to his projects. Peace be to the ashes of that excellent man; who was esteemed by strangers, and idolized by his vassals; and whose great defects, common to all wealthy princes, were eclipsed by his

his still greater virtues. After his death a royal steward was set over his estates; but instead of leaving him at liberty to act according as circumstances might point out, for the benefit of the property, he was so much under the controul of the council of finance at Naples, that he could not even venture to sow the ground without their orders. The melancholy consequences of giving to persons resident in the capital the management of an estate at the distance of 150 miles, and which they had never even seen, may easily be imagined. The population is already decreased one third; the newly cultivated lands again lye waste, and the manufactories are totally annihilated. The following example will convey a very clear idea of the intelligent conduct of the council of finance. At Nava, which fell to the crown by the expulsion of the jesuits, that order (whose economical institutions were generally praiseworthy), had established a custom of marrying eleven couple every year, and giving to each of them a dowry of twenty ducats—(£3.15s.)

In

In a country so favourable to population, the number of their subjects was thus quickly doubled; and this useful institution was approved by the king, who, upon taking possession, left the confirmation of the persons to be married to the royal agent, the syndic, and the curate of the parish. But the council of finance having since appropriated to themselves the right of confirmation, and applications to them being thereby rendered necessary to such as wished to become candidates, this beneficial door is shut against the poor, and the population now decreases in the same proportion in which it formerly augmented.

It appears to me a great defect in the Neapolitan, and most other governments, that not only all the boards are established in the metropolis, but that orders as well upon the most trivial, as upon the most important occasions, must be procured from thence. The persons in office in the capital are consequently overwhelmed with business; and in the provinces, every thing is tardily executed, or perhaps to- tally

tally omitted. Of this I have seen the most vexatious instances, particularly in the case of some well intentioned provincial patriots, whose excellent proposals for the improvement of the interior parts of the kingdom still lye unadopted, and probably unread, in the desk of the minister. For notwithstanding his great activity, and his earnest wishes to be of service to the country, he has it not in his power to attend to all the affairs with which he is overcharged; and if he should refer a proposition to a giunta, or board, the decision is still equally tedious. Thus the desire of well-intentioned men to contribute towards the prosperity of their country soon passeth away, and thus a kingdom, composed of the most fertile provinces, is gradually brought to misery and desolation.

SECTION

SECTION VI.

From TARANTO to NAPLES.

AFTER having passed two days in the pleasant society at the archbishoprick, I recommenced my return to Naples, upon the afternoon of the twenty-fifth of April, with the Baron Ungharo di Montefasi, one of the most enlightened men in the kingdom, and his amiable young wife. I say nothing of my separation from my noble friend the archbishop, of whose kindness and attentions I shall ever retain a most lively and grateful recollection. As neither my companions nor myself had the smallest inclination to be unmercifully jolted upon the rugged roads of the Puglia Petrosa, we chose another route, which, though rather longer, was infinitely preferable. We at first travelled towards the north-west, continually amidst olive grounds,

grounds, occasionally interrupted by pastures preparing for fresh plantations, until we arrived at Palangiana, twelve miles from Taranto. The vineyards at Palangiana caused me to enquire into the method of cultivating them; and I now add the result of my enquiries to what I had collected at Taranto, and the promontory of Leuca, relative to the culture of the vine in the province of Lecce. When a piece of ground is destined for a vineyard, the most intelligent husbandmen turn it up, and work it two years before the planting of the vines; but others content themselves with doing so only the same year. Between January and March, trenches are dug two palms deep, and four palms asunder, in which, cuttings shortened to two eyes, are set four palms distant from each other, and are entirely earthed over; the pinched off top of each cutting being set over it, in order to mark its situation*. There is commonly

* Besides the ample rules left us by Columella, relative to the cultivation of the vine, in his third, fourth, and fifth books, we have a very good account of the method of making a new vineyard, in Palladius, lib. iii. c. 9.

very little choice as to the situation and soil; although indeed gentle hills are preferable to plains, and a soil mixed with bits of calcareous tufa, or one somewhat argillaceous, are deemed the best; for the former produces a sparkling, and the latter a strong-bodied wine, fit for keeping*. No consideration is paid to the choice of the grape; neither could I learn the names of the various sorts. In this country the vines are not fastened to stakes, but are always kept extremely low; and to that end all the shoots, except two, are cut off in the autumn; and even they are kept as short as possible, for the purpose of giving additional strength to the body of the vine†. In the second, and at

• Quique editus Austro

Et filicem carvis invisam pascit aratris:

Hic tibi prævalidas olim multoque fluentes

Sufficiet Baccho vites.

VIRG. Georg. lib. ii. v. 188.

See also Columella, lib. iv. cap. 2. and Pallad. lib. iii.

t. 9.

† Stat provinciarum aliquarum per se vitis sine ullo pedamento; artos suos in se colligens; et brevitate crassitudinem pascens.

PLIN. lib. xiv. c. i.

latest

latest in the third year, the young plants begin to bear. The vines are pruned immediately after the vintage in October, when the shoots are shortened to a palm and a half, by which means they never become dangles. No more than two shoots being ever suffered to remain, they furnish the annual bearers; and a vineyard in April affords only stems two palms high, with one or two branches, a palm and an half long upon each. In most parts of the province the vines undergo two prunings; the *taglio lungho*, which is when the useless shoots are cut off in October; and the *taglio corto*, when the pruning is perfected in March*.

- * Jam tum acer curas venientem extendit in annum
Rusticus, et curvo Saturni dente relictam
Persequitur vitem attondens, fingitque putando.

VINE. Georg. lib. ii. v. 405.

See Columella, lib. v. cap. 10 and 11; Varro, lib. i. c. 31, 35, and 36, and Palladius very clearly and circumstantially, lib. iii. t. 12; who also in t. 14, says, "Vites, quas provinciali more velut arbusculas stare dixi, si instituere velis ramos a quatuor partibus his relinques et in eis brachiis sarmenta per vitis possibilitate servabis. Vites autem, quas candidis in orbem cogantur, sic putentur. Quem admodum hæc, quæ nituntur ridicia aut palis. Illæ vero quæ sine amminiculis jacent, quod per sola indigentia faciendam

Upon the plains, indeed, vines are sometimes found with eight or ten shoots, either dangling or entwined with the branches of the neighbouring vines; but this is not the general practice, and only proves the extraordinary fertility of the soil; all these branches being usually crowded with grapes.

The method of propagating by layers is performed here according to the customary rules. When any vines fall near a vigorous and healthy plant, deep trenches are made from it to the vacant places, in which the necessary layers are disposed, only one branch being left upon the parent stock*.

est vel necessitate provinciæ, primo anno duas gemmas deinde plures habebunt. Sed hujus generis vinea strictius est putanda." See also the same author, lib. iii. c. 15, lib. iv. c. 2, lib. xi. c. 4, and lib. xii. c. 4; where he says that the vines ought to be pruned partly in February and March, and partly in October and November.

* See Columella, lib. iii. c. 7.

Propagationes genera tria sunt; Una, quo visga edita a matre sulco committitur; alterum, quo ipsa mater proferatur atque in plures paleas per suas virgas dividitur; tertium, quo vitis scinditur in duas vel tres partes, si diversis ordinibus deducenda est. And then follow rules for trenching.

Cato, c. 43. Palladius, lib. iii. c. 16. and lib. xi. c. 5 and 6.

But

But at the Capo di Leuca they prefer renewing the vineyards with cuttings; probably because it would be difficult to make trenches sufficiently deep in that rocky soil. The earth is stirred around the vine thrice in a year*, and

* Namque omne quot annis
Terque, quaterque solum scindendum, glebaque versa
Æternum frangenda bidentibus.

VIN. Georg. lib. II. v. 398.

Vinea quam potare tam vere pampinare utile est, nam et materizque fructum habent melius convalescunt, et putatio sequentis anni expeditius, tum etiam minus cicatricosa sit, quam quod viride et tenerum decerpitur protinus convalescit; super hæc quoque melius maturescunt. Ante dies decem quam vinea florescere incipit, pampinatam habeto. Quicquid supervacui enatum fuerit, tollito. Quod in cacumine aut in brachiis natum erit, decerpito; dumtaxat, quæ uvam non habebunt. Cacumina virgarum, ne luxurientur, demotilato. Uvas, quæ meridiem aut occidentem spectabunt, ne præsumantur, suo sibi pampino tegito.

COLUMELLA, lib. iii. c. 2.

The same author says that the ground should be turned over three times, and even oftener. Bidentibus terram vertere utilius est quam aratro. Bidens æqualiter totam vertit; aratrum præterquam quod scannam facit, tum et boves, qui arant, aliquantum virgarum et interdum totas vites frangant. Finis autem fodiendi nulla est; nam quanto sæpius vineam foderis, tanto uberiores fructum reperito.

COLUMELLA, lib. iii. c. 12.

See also the same, lib. v. c. 5, 6, 7, and 8.—Varro, lib. i. c. 31, 32; and Palladius, lib. iii. c. 20, and lib. iv. c. 7.

indeed always when the weeds become too high. In the cold and shaded spots, the superfluous leaves are pulled off; but in very sunny situations, even more shade is desirable than the leaves afford.

The vintage usually commences at the close of September. The grapes are gathered without choice or separation, and spread upon a stone floor in the vineyard, surrounded by a low wall, and sometimes, though not always, covered. It usually joins to a building, in which is a wine-press; and, at the junction, is a hole, communicating with a capacious vat, placed in the ground, below the surface of the floor, upon which the grapes are trodden; and, as soon as the area is full of must, the cork is drawn out of the opening, and the liquor runs into the vat. But some do not tread the grapes until they have lain a few days upon the floor. The rape being afterwards pressed, all the liquor is poured into casks, of about 300 gallons each; but these casks are seldom prepared or sulphurated. It seems impossible to
conceive

conceive a more simple method of making wine, than the above, which is practised at Taranto*, and indeed the wine made there is relished by few strangers who are accustomed to good wine. It has been repeatedly proved that the fault lies more in the want of skill in the inhabi-

* Columella mentions various modes of making wine, and especially in his 13th book. And Palladius thus speaks of the wine-press.

Cellam vinarium septentrioni debemus habere oppositam, frigidam vel obscuram, proximam longe a balneis, stabulis, fumo, sterquilinis, cisternis, aquis et ceteris odoribus horrendi; Ita instructa necessariis, ut non vincatur a fructu, sic autem dispositam ut basilicæ ipsius forma calcatorium loco habeat altiore constructum. Ad quod, inter duos lacus, qui ad excipienda vina hinc inde depressi sint, gradibus tribus fere ascendatur aut quatuor. Ex his lacubus canales structi vel tubi fictiles circa extremo parietes currant, et subjectis lateri suo dolis per vicinos meatus manantia vina defundant. Si copia major est, medium spatium cupis deputabitur, quas ne ambulacra prohibeant vasellis altioribus impositas vel supra dolia possumus collocare spatio inter se longiore distantes, ut si res exigat currentis transitus possit admitti. Quod si cupis locum suum deputabimus, is locus ad calcatorii similitudinem podiis brevibus et testaceo pavimento solidetur, ut etiam si ignorata se cupa diffuderit lacu subdito excipiantur, non peritura vina quæ fluxerint. Lib. i. c. 18. See also the method used by the Romans in constructing their wine-presses; CATO. c. 18.

tants, than in the quality of the grape, or the nature of the climate; and I have tasted at Taranto and Presicce excellent wine made there by persons of superior skill and judgment*.

Immediately beyond Palangiana we traversed a chain of hills stretching from the west towards the east, and before we attained the summit lost sight of the plantations of olive-trees. With them also terminated every trace of population; and from the crest of the hills a boundless plain unfolded itself, upon which the wandering eye in vain sought for trees, houses, and the vestiges of man. This point, indeed, offers to the traveller a most striking contrast

* *Verm et longinquiora Italia ab Aufonio mari, non caruit gloria Tarentina et Servitiana, &c.*

PLIN. lib. xiv. c. 6.

Et Amicus Aulon

Fertilis Baccho minimum Faleris

Invidet Uvis. HORAT. Od. vi. lib. xi. v. 18.

Nobilis et lanis, et felix vitibus Aulon

Des pretiosis tibi vellera, vina mihi.

MARTIAL, lib. xiii. Ep. 125.

Aulon was but a few miles from Taranto.

between

between the almost immeasurable forest of olive-trees towards the south, and the uniform and uncultivated plain towards the north. Thirty tedious miles did we travel across this uninteresting waste before we arrived at Altamura, a royal town that distinguishes itself by a detestable road, extending a mile from its gates. Of the town itself, and of the neighbouring Basilicata, I say nothing, but shall afterwards insert the account given by Abbé Fortis of his journey from Molfetta to Matera, the capital of that province, during which he also visited this place. We alighted at the house of Count Torre, where we were received with all possible friendship, and very sumptuously entertained.

Thirty-six miles constituted our third day's journey from Altamura to Andria, during which we chiefly travelled over heaths and woodlands, with almost as few traces of population as yesterday. This day's journey was however rendered more agreeable than the preceding, by the tracts of woodland, and the occasional appearance

appearance of droves of cattle and horses. We dined at a farm-house, situated in a thicket, whose peaceful inhabitants bore the marks of rural innocence and simplicity, and strongly contrasted with the wretched hut that sheltered us yesterday from the wind that reigns over that Siberian desert. Andria is a baronial town, situated upon the southern limits of the Tavogliere di Puglia, and is supported by agriculture, and the cultivation of the almond-tree, but principally by the Tavogliere. We were here most politely received at a Benedictine convent, where I passed a very agreeable evening with my friend Fortis, who came hither to meet us. The next morning we passed near Canosa, across the famous fields of Cannæ, every spot of which being formerly stained with the noble blood of the Romans, inspired me with the most melancholy feelings*. At noon

* This memorable spot, and every thing relative to its ancient and military story, are amply mentioned by Swinburne, vol. 1.

we reached Cerignola, and arrived late in the evening at Foggia, which is thirty miles from Andria.

Foggia is the seat of a particular tribunal that depends upon the kings alone, and has the management of the Tavogliere, and of all the pastures belonging to the crown; and there also reside such persons as have taken in farm the most extensive tracts of such pasture lands.

I came hither purposely to inform myself with accuracy of every thing concerning the Tavogliere, which I had now traversed in its greatest length and width, and examined with attention. I shall not however attempt to describe either its exact size, its history, or its interior management and direction, which are all descanted upon at large by Galanti; but shall confine myself to the consideration of it in an agricultural point of view.

Almost the whole tract of land, bounded by the Appennines on the west, by the Adriatic on the east, by Mount Voltore, and the town of Andria, on the south, and by Monte Gargano,
and

and the town of San Severo, on the north, is called the Tavogliere di Puglia, and lies chiefly in the province of Apulia. No one being able to give me a satisfactory answer to my enquiries, I cannot determine whether this plain owes its appellation to the opinion that it is as flat as a table (which in fact it is not, being intersected by a variety of hillocks), or to its revenues being always appropriated to the private chest of the sovereign, and consequently becoming, in a certain degree, destined to supply his table. It is about 60 miles long, and 30 broad; and its figure is irregular, for it stretches out in length farther towards the south-west, than towards the south. This plain is little more than one vast piece of pasture, containing no habitations except Foggia, but resembling a lake with well inhabited banks, its confines being thickly studded with towns. Since the suppression of the Jesuits, who had a large portion of it, the Tavogliere belongs wholly to the king, save a few parcels appertaining to some barons. This extensive tract is wholly in pasture, and
hitherto.

hitherto produced the king a very large revenue in the following manner. The land-owners in the mountainous province of Abruzzo have, during time immemorial, possessed large flocks of sheep, their mountains being full of pastures which produce them sufficient maintenance for them in spring, summer, and autumn. But as that province affords but few plains for the support of the sheep during winter, and as the inhabitants are ignorant of the method of housing them, it has long been customary for the shepherds of Abruzzo, at the approach of winter, to drive their flocks down upon the plains of Apulia, where the winter is extremely mild, and there to wait until the ensuing April invite them to return to their mountains*.

* *Pecusve Calabris ante fidus servidum
Lucana mutet pascua.*

HORAT., *Epod. l. v. 57.*

Itaque Grege ovium longè abiguntur ex Apuliâ in
Samnium æstivatum atque ad publicanum prostentur, ac,
si inscriptam pecua paverunt lege Censoriâ committant,
Maliè Rosta campestri, æstate eriguntur in gurgures altos
montes.

VARRO, lib. ii. c. 1.

Galanti

Galanti has faithfully and accurately compared the present price with that which was formerly paid by the shepherds, and has given us the amount of the tolls paid for the sheep on entering the province, together with the advantage made, by former princes, of the situation and industry of the people of Abruzzo*. I shall therefore only state that a few years since, upwards of 1,200,000 sheep were every winter driven down to these plains, which annually produced to the crown more than 400,000 ducats (£75,000,) in the following manner. In the spring, they who chose to winter their cattle (of which all kinds were included) upon the Tavogliere, gave in the number to the board at Foggia; when a certain portion of ground was allotted to them at a regulated price; and this rent, and the toll paid for the sheep upon entering the province, formed this

* Many flocks of sheep pass the summer in the mountains of Calabria Citra, and come down to the plains of the Principati, and of Basilicata and Apulia during the winter.

part of the royal revenue. The allotment was altered every year, except in some districts which had been granted in fee farm to some powerful barons. This arrangement proved so beneficial that the profits annually increased until within a few years, when they began to diminish, and were lately reduced so low, that government thought proper to enquire into the causes, as well as to consider the means of putting the Tavogliere upon the most profitable footing. I pass over the result of these enquiries, made either by ignorant or interested persons, and shall state the three principal causes of the diminution of the royal revenue, as they were mentioned to me by impartial persons well acquainted with that part of the country.

First. The farmers usually give in more cattle than they actually intend to drive upon the ground, of which they break up a great part, and sow with corn; which succeeds in wet seasons, but is subject to the blight in dry ones; but as some pasture is always left,
and

and as the rent is very low, they can generally rely upon considerable profits, and are never exposed to much loss. Meanwhile the king is rendered a very considerable loser by this frequent practice.

Secondly. As the land is let only for one year, the farmers endeavour to draw as much profit from it as possible, and therefore feed it off to the very last blade, without erecting sheds for their cattle, which are parked in with hurdles made of the *Ferula*, as before mentioned. Thus the pastures not only diminish in value every year, but as the cattle are exposed to the weather, it happens that many of them perish in severe winters, as was the case in 1788 and 1789, when more than 40,000 sheep, and many other cattle, were destroyed, by which means several persons were reduced to distress, and the king exposed to no inconsiderable loss.

Thirdly. The opulent inhabitants of Foggia are chiefly to be considered as the great cause of the diminution of the royal income

come from the Tavogliere, for being well acquainted with the members of the board constantly resident amongst them, they annually monopolize the best lots at a very low price, and underlet them at a high rate to the shepherds of Abruzzo. This has been carried so far, that the breeding of sheep in Abruzzo is greatly fallen into decay, and the Tavogliere consequently remains unvisited and unprofitable. In order to obviate this abuse, one of the commissaries employed in searching for the causes of the evil, recommended leases for six years; but probably this was too advantageous to the inhabitants of Foggia, since the diminution in the flocks from Abruzzo seems principally to date from that period.

It is now a question how the Tavogliere should be employed to the best advantage of the royal purse; and the projectors chiefly confine themselves to the notion that it can only be made use of as pasture ground. But when the people of Abruzzo discover that in addition to their own pastures they have land enough to produce

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duce a sufficient quantity of winter-forage, and that they can in consequence be relieved from the heavy tolls and rents annually paid to Apulia; the want of flocks and herds will cause the Tavogliere to be considered in another point of view. Nor do I see any satisfactory reason why it should not be converted to all the purposes of agriculture; for although the surface of this undulated plain consists in some places of only a thin layer of vegetable earth over strata of tufa, and hard limestone; yet by far the greater part is a deep and rich clay, capable of the most profitable cultivation. There are also some tracts of loamy soil; and it may with truth be said that the Tavogliere consists more of fertile than of unprofitable land. It is likewise watered by several rivulets, which, although shallow, and almost dry in summer, are for much the more copious in winter. Nor must it be forgotten that in wet seasons corn has succeeded in many parts of the Tavogliere; that pear-trees grow wild in the very worst parts of it; that the *Ferula* attains the
cub height

height of twelve feet; and especially that there is a striking example in the conduct of the Jesuits, who, according to their laudable custom, had put districts in cultivation at Ordona and Orta, and between Cerignola and Ortonna, where not only corn and vines, but all sorts of trees, succeeded so admirably, that I was astonished at the remnants of those plantations, which, upon the suppression of the order of Jesuits, the royal superintendants had suffered to decay. The excellent example of the Jesuits should be followed, and colonies should be established in the most fertile parts of the Tavoliere, which might easily be supplied with water by means of cisterns and reservoirs to be cut in the limestone, and refreshed by canals in the winter. An hundred thousand of the idle inhabitants of Naples might be here employed, and subsist by the cultivation and product of such an extent of land, and the necessary wants of such a population; and thus the King would doubtless receive much more than 400,000 ducats annually. This project has to many appeared im-

portant and practicable; but others objected, that as the Tavogliere had always been in pasture, experience pointed out that as the best mode of cultivation; that sheep were as productive as arable land, and that large tracts of land were sacrificed to sheep-walks in England, the best of cultivated countries. And in truth I shall readily subscribe to the same opinion, when I see the Neapolitans equal the English in the fineness of their wool, in the excellence of their manufactures, the science of dying, and the comprehension of trade.

Great quantities of wool, hides, and corn are bought and sold at the fair of Foggia, which is one of the most frequented in the kingdom. From Foggia, which contains nothing interesting to a traveller, we continued our journey fourteen miles across the north-west part of the Tavogliere, to the bridge of Bovino. As we approached the Appennines, I saw, upon a hill the town of Troja, where about a year since were found forty-four parchment manuscripts, which, according to a register there, were given to the church

church of Troja by a canon in the eleventh century. They are the works of some of the fathers, finely written, with a margin, of the width of four fingers, and are now in the royal library belonging to the Studii at Naples.

The valley of Bovino was now in its most beautiful apparel; the yellow *Cytisus*, the white *Acacia falsa*, and the red *Arbor vite*, cloathed the sides of the mountains; and this ravishing scenery was enlivened by the murmurs of the brook, and the chirping of the feathered throng.

Of Ariano, where we slept, and of the remaining part of the journey by Avellina, it is unnecessary to speak again; and being arrived at the busy metropolis, I thus terminated a most agreeable journey.

SECTION VII.

*Journey from MOLFETTA to MATERA and
GRAYINA, by the ABBE FORTIS.*

THE road from Molfetta to Terlizzi traverses a white lime-stone plain, more or less inclining towards the sea; but this tract, though rather uneven, is not so undulated as the plains of the Daunian Apulia*. These inequalities have probably been occasioned by excavations, of the same origin as the Pulo di Molfetta; and had they preserved the same form of an inverted cone, perhaps they would

* It may not be impertinent to observe that the Tavoliere di Puglia, is still called the Daunian Apulia, by the learned, who also distinguish the tract of land between Barletta and Bari by the name of Peucezia, the country about Brindisi by that of Japygia, and the environs of Oria and Francavilla by that of Messapia; whilst the whole heel of the boot is called Provincia Salentina, and the Basilicata is termed Lucania. De Salis.

also have become natural saltpetre caverns. The hard limestone, with which the church at Terlizzi is constructed, is impregnated with saltpetre, but contains no other extraneous bodies, except a very large sort of corallite.

The town of Terlizzi contains 10,000 inhabitants, whose open, chearful, and social character, greatly distinguishes them from their gloomy neighbours at Molfetta, Giovenazzo, and Ruvo. Although they are much less opulent than the people of Molfetta, and subsist only by agriculture, they have liberated themselves from feudal slavery, at the price of 90,000 ducats (£.16,875), advanced to them by a mercantile house, and for which they chearfully pay an annual interest; a step which their Molfetta neighbours never could resolve to follow. Their great profits arise from the cultivation of the almond tree; for they have but few olive-trees, their elevated situation exposing them to frost, by which also the almond-trees are sometimes severely affected. A solemn feast is annually celebrated here, as in

all the towns of the kingdom, in honour of the patron of the place. At Terlizzi, the patron is a Madonna, who appears upon her feast day, made of paste-board, in a pasteboard carriage, drawn by six horses, of the same materials. This airy groupe is conveyed through all parts of the town, at the annual charge of 400 ducats (6.75.) The unprejudiced inhabitants have long since wished to employ this sum in mending the highways, but have as constantly been opposed by the lower classes of people, who, in conformity to the views of their fellow citizens, have, at their own expence, made a very fine road, a mile in length, from one of the gates of the town. It is singular that the inhabitants of Terlizzi never would permit any of the religious orders, possessing property, to establish themselves in the town, and that there should even be clauses in their laws, which preserve them from that danger. Even the Jesuits, who insinuated themselves every where, never could succeed in making their nest at Terlizzi; and this perhaps is the reason why the inhabitants

are

are more liberal, hospitable, and cheerful than those in the neighbouring towns, which swarm with the monastic tribe. About three miles from the town, the inferior citizens, artists, and mechanics have built a whole village of country houses, consisting of upwards of an hundred small huts, constructed with uncemented stone, where they amuse themselves during the fine season of the year.

Ruvo, a town not far from Terlizzi, appears by its silver medals to have been formerly in a very flourishing state; it is however at present not only quite the reverse, but extremely filthy and disgusting.

From Terlizzi, to a country-house called San Giorgio, the soil is the same as near the town, but is there succeeded by a tufa, stretching several hundred yards into the wood of Santa Eugenia, beyond which is a plain belonging to the town of Bitonto. Towards the sea the inhabitants have planted olive-trees, but the rest of their territory is wholly devoted to the cultivation of corn. Probably this was always
their

their principal branch of industry; an ear of corn being found upon their medals, as also upon those of Ruvo. This plain is bounded on the south-east by a chain of low, naked, stony hills, called La Murgia, chiefly composed of hard lime-stone, and intersected during eight miles by a winding ravine, which seems to have been formerly the bed of a torrent. The road is extremely bad and dangerous, being frequently infested by banditti. To this labyrinth succeed the plains of Altamura, where tufa is seen for a few moments, but is speedily replaced by a hard lime-stone; in the dry walls whereof I found the same varieties, colours, pudding-stone, petrifications, and particularly orthoceratites, as in Dalmatia. La Murgia resembled the bald hills upon the banks of the Sebenico; and the plains of Cognie Bruta were brought to my recollection by those of Altamura. Leaving that town upon my left, I continued my journey to Gravina, a baronial town in the Basilicata, belonging to the family of Orfini. Two miles before I reached that place

place, I again discovered the tufa, which had disappeared upon the plain, and found it exactly like that of Bisteglia, Molfetta, Andria, and Canosa. Near the two first towns it appears like a crust upon the plain; but near the others, as also at Gravina, it swells into moderate hillocks, which near the latter place extend to a considerable distance. Gravina stands in a deep valley, which was probably hollowed out of the tufa by the torrent Grava, upon whose banks the town is so situated, that the traveller is not aware of it until he is hard by; and the approaches to it are rendered terrifying and dangerous by the extreme steepness of the hills. The town is surrounded by good walls and towers, of square blocks of tufa, probably constructed in the sixteenth century. I cannot however determine when the town was founded; but as some very fine vases have been dug up there, it was perhaps inhabited at a very early period. Coins and pictures, of the time of the Greek emperors, have been found; but no Roman inscriptions or monuments

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treasures have as yet been discovered. There is not one tolerable house in the whole town, which contains 10,000 inhabitants; and the common people dwell chiefly, as at Ariano, in caverns hollowed out of the tufa. These caverns must undoubtedly have been inhabited during the reigns of the Greek emperors; for there are some representing churches, with a nave and two aisles, paved, and adorned with fresco paintings of saints, of which there are still many traces that attest the taste of the seventh and eighth centuries. The inhabitants of these subterraneous dwellings are excessively filthy; and the unwholesome state of their bodies is sufficiently indicated by their complexions. Not less offensive and dirty are the streets, which are almost intolerable to a stranger. Such a climate seems to be peculiarly favourable to monks, who indeed abound at Gravina; but their cleanliness was painted to me in such colours as did away all desire of acquaintance with them.

Upon the twentieth of April commenced
at

at Gravina one of the greatest fairs in the kingdom, which is held upon a place little better than a morass; and as the resort is extremely great, all the convents are then converted into inns. The merchants are forced to pay a very heavy tax for wooden booths, so ill constructed, that they are every where exposed to the rain; so that whole warehouses have frequently been spoiled, and a dealer in prints and maps this year lost a stock worth 3000 ducats—(1762. 108.) The Neapolitan shop-keepers, milleners, and jewellers, here expose to sale their old-fashioned goods, which are greedily purchased by the provincial apes, and half wild beauties, who flock thither from the neighbouring mountains, and return to their sequestered nests in the rocks, to be envied by their less opulent relatives and neighbours. But cattle form the main object of sale at this fair, where the stewards of the barons dispose of the horses, mules, buffaloes, sheep, and swine, as also of such cheese, salt meat, and raw wool, as are not wanted upon the estates.

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I had undertaken this journey entirely for the purpose of observing how saltpetre is made here, and was not a little surprized at finding all the inhabited and uninhabited caverns in the tufa hills, full of saltpetre, which every where covers the tufa. But the undertakers of the saltpetre works derive little advantage from this circumstance, and choose to vex the poor inhabitants with the privilege of cleansing their stables, and carrying away the dung, rather than make use of the native saltpetre, and leave the dung for the purpose of fertilizing the acid corn-fields of the Basilicata. This is the more vexatious, as the environs of Gravina produce nothing but corn, of which their unmanured fields annually yield 30,000 tomoli; so that the advantage of manuring the ground may easily be calculated. The penalty of being sent to the galleys is also inflicted upon such as collect and sell the saltpetre, which nature bounteously offers in the caverns, and which once formed a very considerable branch of the trade of Gravina.

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The following is the method here practised of preparing the saltpetre. First, instead of sweeping away only the impregnated earth in the grottos, they cut away large pieces of tuff-stone, which they carry off, and mix with the dung.

Secondly. The earth is not cleansed by the help of fire, though the difference in the province is as two to six, and in the expence, as two to three.

Thirdly. The lie is never stirred about, but is suffered to evaporate before it is sufficiently saturated.

Fourthly. The evaporation is effected by stant boiling.

Fifthly. As the fuel is furnished gratis to the undertakers, they rather waste than spare it, although it is very dear in a country wholly destitute of wood.

Lastly. The purified earth is suffered to remain useless in the open air, although in such a climate it might be turned to account, if properly protected from the sun and rain.

As the saltpetre contracts extend over certain districts, that of Gravina comprehends those of Matera, Genosa, Grottole, Pamarica, and Monte Scaglioso, of which the two first contain as much native saltpetre in their tufa caverns, as in any other country would make them considered as a treasure. The contractor at Gravina is bound annually to furnish the crown with 200 cantars of pure saltpetre; but he might easily deliver 2000, without the least injury to the inhabitants.

In travelling from Gravina to Matera I ascended a mountain, and arrived upon a plain, whose surface of vegetable earth reposes upon clay and tufa. Three miles from Gravina I entered an oak forest belonging to the Duke of Gravina, three miles across, and in which a great number of cattle were grazing. Probably the soil of this forest was once the bed of a torrent; for it consists of a coarse sand, mixed with round stones. Upon quitting the wood I traversed some level corn-fields during two miles, and descended to Picciano, where the
 tufa

tufa again appears under the clay, and is said also to be impregnated with saltpetre. I here crossed the bed of a torrent, and during an hour climbed up a hill, towards a tuffstone ridge, singularly intersected, in all directions, by raised veins; and below it, not far from Matera, is dug a thick tufa, that well answers the purposes of building. The petrifications correspond with those at Andria and Molfetta. After a journey of twelve miles I reached Matera, the capital of the Basilicata, the seat of a tribunal, and the residence of an archbishop.

Although this town was not founded before the eighth century, the granite pillars, with corinthian capitals, at the great door of the archiepiscopal palace, and upon the outside of the church, seem to indicate the existence of a town here, or in the neighbourhood, of greater antiquity. As there are no similar columns within the church, which was built in 1270, those on the outside were probably discovered afterwards.

Matera is situated, like Gravina, in a valley;

good fact deep, the steep sides of the hills being full of caverns, one above another. It seems indeed as if the grottos alone had been inhabited during the early ages; for the houses appear to belong to the sixteenth century; and amongst the grottos there are not only churches, of which one is still called Santa Maria dell' Albondanza, but also convents, most of which are still to be discerned. In general the lower classes still inhabit these grottos, some of which are very regularly excavated, and to which they add, as at Ariano, a pent-house, with a wall, door, and windows. I visited the greater part of them, although not without danger; for if I had made one false step, I had inevitably fallen down the precipice, and been crushed to pieces; nor could I help shuddering at the idea that so many thousand persons had, during so many ages, been successively exposed to such dangers.

I found the tuff full of petrifications, and collected some fine terebratulæ, echinites with their spines, peccinities, and haliotites; but
could

could find neither chamites, nor ostracites, which however abound at Andria. I observed several round layers of hard limestone inclosed in this tufa, whose interior must be extremely soft; for it appears that the first inhabitants made excavations in it without the assistance of iron implements; a sort of knife of flint-stone, and axes, like those now used by the savage nations, having been found in these caverns. This tufa is also impregnated with saltpetre, which oozes out wherever it is exposed to the sun; and although the caverns situated towards the north are very damp, the tufa, when broken, dried and pounded, affords a sufficient quantity of saltpetre.

Many of the innumerable caverns, in the steep banks of the Grava and Gravitella, are deemed inaccessible; but the smugglers let themselves down by ropes, and usually find there great lumps of saltpetre, which, when purified, is called Camfora, from its exterior similitude to camphire. These smugglers know better than the contractors how to use the advantage

which nature has bestowed upon this country, by giving it the native saltpetre*. *Matera* is said to contain 14,000 inhabitants, amongst whom are several very rich and considerable families. But although the town is the seat of a tribunal, and the residence of a numerous clergy, there reigns, especially among the latter, an astonishing degree of ignorance; and as for the arts and sciences, no favourable mention can be made of them. The people of *Matera* principally subsist by agriculture, and the breeding of horses, mules, sheep, and hogs.

* The custom which the people in the southern, or rather central provinces of the kingdom, still preserve, of dwelling in caverns, which for the most part contain saltpetre, might lead perhaps to the idea that the saltpetre is caused by these caverns having been formerly more inhabited than at present; but as at the *Pulo di Molfetta* I saw small holes in the hard lime-stone, in which was saltpetre; and as it is evident that holes, of larger dimensions, but alike in form, were their size to the coxing out of the saltpetre, it is possible that large caverns may gradually have been formed in the same manner. Nor can I possibly conceive that a whole mass of lime-stone could be impregnated several yards thick with saltpetre by the mere circumstance of habitation.

Dr. SALIS.

Bread,

Bread, water, and wine, the three great necessities of life, are in high perfection at this place; and the two first are not inferior to any in the kingdom. The women, of the upper classes, are not without beauty; but the common people are extremely ugly, ragged, and filthy, of a cruel and barbarous disposition, and so addicted to the most atrocious crimes, that the prisons continually swarm with malefactors, deserving death in its severest forms. This is principally to be ascribed to the clouds of ignorance and darkness in which the province of Basilicata is still enveloped, and to the little care which has hitherto been taken to enlighten its inhabitants; nor will they emerge from their present state of barbarism until they have better roads, more humane barons, and more intelligent and upright governors. Much is here attributed to the misfortune of having had two successive presidents, whose character and conduct at length occasioned their recall; but I ascribe much more to the abominable filth so prevalent in this town, to the mode of living,

and to the provisions; which, with the above seasons, have rendered these people unworthy of the human form, and exposed them to disorders and accidents with which more reasonable beings seldom are afflicted. Without speaking of the number of cretins (although without goitres), and of those who are deformed from their birth, it is sufficient to mention the Lupi Mannari, who, rushing out of their subterraneous holes during the night, send forth the most terrifying howls, wallow in the mud, and in the heaps of filth and ordure, and desperately attack such as chance to fall in their way.

In the summer are seen a number of men and women, called Tarantulati, who, decked out in vine-leaves and red ribbons, are suffered to dance unmolested about the streets.

Finally; a disease called the monacello, or Pincube, is here very common amongst men and women, who are delivered over to exorcism, and other impositions of the priests. All these maladies are usually preceded by a profound melancholy, and are caused not so much
by

by the heat of the climate, as by the mode of life, and the nature of the diet prevalent in this part of the country. The excessive use of salt and rancid pork, the uncleanness in the houses, and in the dark and humid caverns, and the evaporations from the open privies; and hills of filth and ordure that are left in the streets, are the physical causes of these melancholy disorders, which generally terminate in the most dreadful manner. To fill up the measure of misfortune, there is no tolerable physician or surgeon throughout the country, and I advise no one to suffer a tooth to be drawn there, unless he chooses also to risk the fracture of his jaw.

All the soil around Matera is not of the nature of tufa; for in many places it is argillaceous, and here and there is some gyps, which is also found in considerable quantity at Monte Scaglioso, about six miles distant*.

* The Author sent to me, from the environs of Monte Scaglioso, some fine specimens of Muscovy tale, so large and
R 4
beautifully

The volcanic swamps, or macalubas, exactly resembling those in Sicily, the duchy of Modena, and the Bergullo, near Imola, are found in great abundance near Matera, and in other parts of the Basilicata. Were they pierced with a borer, there is little doubt of their producing somewhat remarkable, and probably slate and coal.

From Matera I traversed an undulated plain with an excellent soil, but destitute of trees, to Altamura, a town containing 16,000 inhabitants, and founded in the year 1232, during the reign of the Emperor Frederic the Second. In its neighbourhood are the remains of an ancient city, which however is certainly not Petilia, as affirmed by the learned of Altamura. Corn and cattle here form the chief objects of

beautifully transparent, that it is used there, and in many towns in the central provinces of the kingdom, in lieu of panes of glass. It is incredible how much mineralogical information might be procured in the interior of the kingdom, were it as secure travelling there as upon the coasts.

Dr. SALIS.

industry.

industry. In the environs are several hollow places, or puli, with limestone strata hollowed out, and impregnated with saltpetre, and long since known to the smugglers.

SECTION

SECTION VIII.

JOURNEY to PORTICI.

BETWEEN uninterrupted rows of villas and gardens, the road passes from the busy hum of Naples to the quiet Portici, the Baia of the modern Neapolitans, extending almost as far as the Torre dell' Annunziata. Although the present nobles relish all kinds of dissipation and amusement as well as the ancient Romans, yet the latter understood the enjoyment of a country life better than the moderns. When by means of descriptions, and still existing vestiges, we compare their villas with those of Portici, we cannot help bewailing the bad taste and indiscretion of the moderns, whose enormous and ill-distributed palaces, surrounded by arid, uniform, and unshaded gardens, are continually exposed to the

irresistible

irreversible attacks of an all-destroying lava. It is true that Portici is much more healthy than Baia, that it possesses a magnificent prospect, especially of the capital, and that it is surrounded by a most fertile country, productive of the choicest fruits. But that purity and health, which rendered it the paradise of antiquity, might easily be restored to the air of Baia, which possesses every other advantage in a superior degree, and whose enjoyment would be undisturbed by the frightful crackling of a volcano, or the destructive inroads of a stream of fire.

Between the Torre del Greco and the Torre dell' Annunziata I crossed a stream of lava, that broke out in 1769, at the foot of Vesuvius, not far from the road, and ran into the sea, across a beautiful and fertile country, which it converted into a desert, and a chaos. The place of its origin is distinguished by three moderate hills, of a conic form, and hollow in the centre. The comparison of this waste with the neighbouring Elysium, exposed to a similar fate, awakens

awakens the most melancholy thoughts; but when on the other hand we consider that even this desolation bears within it the seeds of a still more fruitful district, that a Paradise may be formed therefrom, superior to the surrounding plains, that this lava is already become earth, and that plants are cherished in some parts of its unfriendly lap, we are in some measure comforted by the universal law of nature, that even destruction contains the germ of life. Not less striking is the circumstance of this lava being so soon capable of vegetation, since some in Sicily discovers no symptoms of decomposition, though it has been exposed to a much warmer sun, and all the changes of the atmosphere, during several centuries. This difference is chiefly to be ascribed to their interior composition; the lava of Mount *Ætna* containing feldtspath and pebbles, whilst that of *Vesuvius* principally consists of schorl, granite, and argillaceous earth. They who judge of the age of lava by its progress in decomposition must be always liable to error, unless they at

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the same time take into the account its various component parts. They also have been greatly wide of the truth, who have judged of the periods in which the lava has flowed, by the thickness of the layers of earth, between streams of lava that lie one above another; for even allowing that the date of one or two might be given as a foundation upon which to proceed, one sort of lava will in ten years have a stratum of earth a foot deep upon it, and another sort have scarcely the same quantity in two hundred years.

From the Torre dell' Annunziata to Nocera, a distance of about ten miles, the road passes near the ancient Pompeii, and over a very fertile and well cultivated country to La Scafata, where it traverses the Sarno. Nocera, the Nuceria of the ancients, is situated nineteen miles from Naples, at the foot of that branch of the Apennines, which, separating from the great mass near Avella, and stretching towards the south-west, advances into the sea, twelve miles beyond Castellamare, and divides the bay of
Naples

Naples from that of Salerno. Near Sorrento and Massa, on its northern side, it forms a gently inclining shore, embellished with houses and fertile fields; but upon the side of Salerno it consists of almost perpendicular walls of rock, and the traveller is astonished at the situation of the neglected Amalfi, of Manduri (famous for the excellence of its macaroni), and of the fishfull Gassuri, clinging to the sides of the most stupendous rocks.

Though limestone constitutes the prevailing mass of these mountains, yet the amphitheatrically formed Sorrento has a volcanic soil, whose origin must be very doubtful to the observer, unless he can persuade himself that a volcano once existed in this chain of calcareous rock. The hills around Nocera are mostly isolated, and have by no means the appearance of a connected chain, but rather of masses formed by inundation; and their steep sides are clothed with meagre coppices.

The town of Nocera is not ill built, and contains about 16,000 inhabitants, whose wild
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and atrabilarian countenances are by no means inviting; nor was I surprised at hearing that scarcely a day passes without an assassination. I could indeed almost persuade myself that this blood thirsty disposition is rather encouraged than checked, in hopes of exterminating this wild race of people by their own hands.

The surrounding lands are finely cultivated; and a *moggia* of ground worth 600 ducats—(£112. 10s.)—is usually let for 20 or 25 ducats a year—(from £3. 15s. to £4. 13s. 9d.)

As I passed the evening in the royal barracks with the Baron de Bock, a brave and worthy officer, commanding the regiment in garrison, I had no opportunity of learning amongst soldiers any thing relative to the arts of peace, or the manufactures of Nocera; and the antiquities have been sufficiently described by Swinburne, as well as accurately represented in the *Voyage Pittoresque*.

Early the next morning I continued my journey towards Salerno. The road through the valley of La Cava traverses the above-mentioned

tioned chain, and runs through it almost to the gulph of Salerno. He who is satiated with the Campagna Felice, which, though rich, becomes tedious from its uniformity; he who is tired of the majestic but ever resembling prospect of the vast surface of the sea; and he who distracted with the unceasing noise and bustle of the metropolis, is desirous of fresh air, solitude, and nature, let him repair to this peaceful and enchanting valley. The gentle slopes of the hills are here cloathed with wood, and their pointed summits crowned with numerous towers; whilst smiling villages, surrounded with vineyards and corn-fields, embellish the recesses of the winding vallies, which either spread out into richly cultivated plains, or are narrowed into shady dingles, bounded by lofty rocks. The highway passes through this delightful country; and the traveller is continually amused with a succession of beautiful villas, substantial villages, embosomed in trees, and ruins of castles, aqueducts, and bridges. Claude Lorraine and Salvator Rosa,

Rosa, here formed their taste, and borrowed from nature her most secret charms. A sudden prospect of the sea, bursting upon me, roused me from the reverie which my passage through this romantic valley had occasioned; and a road cut in the rock, high above the waters, conducted me to the gates of Salerno. That town, which is twenty-eight miles distant from Naples, and nine from Nocera, is situated upon the gulph to which it gives its name, and is built partly upon the southern acclivities of the projecting chain of Appennines, and partly upon the plain which there opens towards the south. It is to be regretted that the advantages arising from its situation, extent, and handsome edifices, should be annihilated by very narrow streets, and a most unwholesome air. It appears like a desert, except during the fair, which, with those of Foggia and Gravina, is one of the most considerable in the kingdom, and lasts from the twelfth to the twenty-first of September. It is chiefly a fair for horses and cattle; and the sea-beach was

now thronged with an incredible number of horses, asses, mules, oxen, and buffaloes. I was much rejoiced to find the actual accomplishment of what I could only wish during my journey through Apulia; for the newly raised regiment of cavalry had purchased at this fair a number of very fine horses. If, according to the new regulations for the cavalry, only good and handsome horses are to be accepted; and if they continue to allow the dealers a full and free liberty of fixing a price, the studs will not only be shortly increased and improved, but the King of Naples will enjoy the benefit of possessing cavalry, composed of some of the finest horses in Europe, the entire production of his own dominions.

The current price of an unblemished colt, rising three years, was sixty ducats—(£ 11. 5s.); but a well-broken horse, or one of any particular colour, especially if wanted as a match, was sold for 100 ducats—(£ 18. 15s.)—and sometimes more. A couple of the finest oxen fetched eighty ducats—(£ 15.)—a very extravagant

vagant price, occasioned by the inattention to grazing, that now prevails throughout the kingdom. The fair was particularly crouded with buffaloes, a breed to which much attention has lately been given by the proprietors of extensive marshes. As that animal delights in morasses and unwholfome swamps, which are but too frequent along the Mediterranean sea, from Salerno to Piana di Calabria, the greatest droves of buffaloes are to be found there, upon the banks of the Garigliano, and upon the northern plains in the Terra di Lavoro. Little service is however obtained from these animals, they being seldom used for draught, except in conveying timber for the royal navy, from the forests of Calabria, to the sea coast. As they generally lye wallowing in the mud, like the rhinoceros, and are extremely fat, their strong and rancid flesh is eaten only by the lowest classes of people; the chine being the only part that comes to the tables of the opulent; but their milk is extremely pleasant; and the small new cheeses, called muzzarelle,

are reckoned delicious, both by strangers and Neapolitans. The buffalo is never paired with a cow, nor a bull with a buffalo; and indeed those beasts differ extremely from each other in a great variety of particulars; for when the buffalo looks round, it stretches out its head so as to bring its muzzle in a horizontal line with its neck; its horns are much stronger and broader at the root, and bent backwards towards the neck, as well as towards each other; its forehead is more arched, broad, and hairy, and its nose is shorter and thicker; its carcase also is smaller, and more compact, but thicker in proportion; its feet are more clumsy, but not so long; its colour is generally of a dirty black, and its lowing is like the loud blast of a trumpet. I am unable to determine whether it be true, as I have heard asserted by many, that the female buffalo is subject to periodical disorders, similar to those of the fair sex. These animals are tamed easier than might be expected; and I saw with surprise that they patiently suffered themselves to be beaten by their

their drivers, who sat on horseback, armed with sticks in the shape of lances. But they are little to be trusted; and their morose countenance, and traitorous eyes, betray the falsity of their character. An ox soon forgets even the unmerited blows which it receives; but a buffalo not only bears them in mind, but calmly waits for a convenient opportunity of revenge. This assertion is proved by the following anecdote, which I relate upon the authority of a gentleman, who is proprietor of a great number of buffaloes. A young and heedless driver so irritated a buffalo, with blows and ill treatment, that the poor beast, provoked almost to madness, furiously attacked the boy, and would have totally destroyed him, had he not been saved by the timely intervention of some other drivers. This buffalo was soon after sent with others to a distant part of the country; but it happening two years afterwards that the boy had occasion to traverse the pasture where his old enemy was feeding, the buffalo no sooner saw than recollected him; but without taking

any immediate notice, observed his proceedings, and when it saw that the boy had lain down to sleep under a tree, it ran at him, and severely gored him with its horns. Although some circumstances render the truth of this history rather doubtful, I could not help communicating it, as the person from whom I received it, is worthy of the greatest credit. But the following proof of the great sagacity of the buffalo, attested by the whole province, merits our utmost credit and attention. The road to the two Calabrias is traversed between Persano and Poestum by the river Sele, which in winter is very deep and rapid, and was destitute, until lately, both of bridge and ferry-boat. A buffalo was therefore employed to carry over the weekly courier and his mail, and learned its business so well, that every week it quitted the pasture, appeared at the river side upon the day and hour when the courier usually arrived, suffered the portmanteau to be placed upon its back, and when that was not too heavy, gave the like permission to the man; but

but when the portmanteau was too weighty, it pushed the courier away with its horns, upon his offering to mount, swam across the river, suffered the mail to be taken off, and returned to fetch the courier. It continued this employment during several years, and its death, which happened lately, at a very advanced age, was a most important event in the province. It is to be lamented that no greater advantage is made of these beasts, whose little estimation here is sufficiently testified by the low price they bear; a buffalo not fetching more than from fifteen to twenty ducats—(from £2. 16s. 3d. to £3. 15s.)

After satisfying my curiosity at the fair, I returned along the before-mentioned road in the rock to Vietri, a village about a mile and an half from Salerno, at the termination of the valley of La Cava, and situated near the sea shore, but high above the water. The air of this place is so pure and wholesome, that all whom business and amusement call to the fair, return hither towards evening. I was received

in the most friendly manner by the Duchess of Martina, the worthy consort of that prince who had loaded me with such civilities at St. Basil, I here found a numerous company, composed of the principal nobility of the kingdom, whose dress and exterior deportment in no wise announced their illustrious descent; but upon a nearer acquaintance with them, their good nature and friendly sentiments did away every prejudice against them. Travellers are but too apt to speak injuriously and unreasonably of the Neapolitan nobility, without being sufficiently and closely acquainted with their merits, manners, and dispositions. After dinner we went to La Cava, the chief place in the valley, in order to take a nearer view of all its beauties; when I saw, with the greatest satisfaction, that I had not been surprized and deceived by its striking contrast with the Campagna Felice; for this pastoral valley not only abounds with the most picturesque beauties, but is in a very high state of cultivation, and full of country houses, chiefly belonging to the Neapolitan nobility,

ability, and of villages inhabited by an ingenious and industrious people.

On the other side of the valley above the sea, Vietri, La Cava, and San Nicola, swarm with inhabitants, some of whom are employed in agriculture, and others in commerce and manufactures. Raw cotton, to the amount of 150,000 ducats—(£28,125)—is annually imported here from Taranto, and manufactured into all sorts of fine articles; there are also dying-houses and paper-mills; in short, nature has here united with industry and art, and given a conspicuous proof of what may be accomplished in such a climate, when man second her endeavours.

Upon the tops of some of the bushy hills, which on either side embellished the valley of La Cava, are small circular turrets, that are used in catching the wild pigeons in their flight through the valley, towards the close of September. A man is posted upon each turret, and as soon as the pigeons enter the valley, and approach the first tower, he flings a flat stone over

over them with such force that the birds, deceived by the whistling noise of the stone, fancy it a bird of prey, and hasten their flight towards a place of refuge. The sling is repeated at every tower, until the birds are thus driven to the last turret in the valley, where a large net is spread in the hollows amongst the bushes, in which the affrighted pigeons are taken in great numbers. This diversion requires much practice and dexterity in slinging the stone, but is said to be extremely entertaining.

I left Vietri whilst it was yet dark, with the view of reaching Pœstum at an early hour, in order that I might leisurely consider the objects there, and return to Vietri in the evening; making in the whole a journey of about sixty miles. Beyond Salerno, the dawn of day discovered to me that the hills again approach the sea, about a mile beyond that town. The last of them is crowned with a ruined castle, of which there are three around the town, and which were probably erected at different periods

riods by the Greeks, Lombards, and Saracens; at least it is certain that all those nations were accustomed to cover their conquered towns of importance with strong holds.

It is remarkable that the Lombard princes of Salerno maintained themselves until the year 1077, when the valiant Robert Guiscard forever deprived them of their possessions*. From

* So I was until now induced to think by all the authors whom I consulted upon that subject. But I since find in the second volume of the first part of the Arabian code, translated at Palermo, that the Saracens, who possessed Sicily about 827, conquered Salerno, by them called Salema, and drove out the Lombard princes in 905. (Little attention is to be paid to the Arabian mode of reckoning, which in 100 years amounts only to the difference of a very few months). In 920 the Greeks retook it; and as they soon afterwards made an agreement with the Saracens relative to Calabria, they kept possession of that part of Italy, on payment of a tribute of 20,000 zarmahbubs (a gold coin valued at about six shillings sterling) until 942, when peace was again disturbed by the imprudent and avaricious conduct of the emperor Constantine Porphyro-genitus. Peace and war alternately took place, until 952, when the Greek emperor again consented to pay a tribute of 40,000 zarmahbubs; but this agreement was not of long duration, and in 986, the Saracens were almost exterminated by the armies of Otho the third, and Basil the Greek emperor, and Calabria was wholly freed from them.

the above castle the hills recede far into the country, towards the main stem of the Appennines, leaving between them and the sea a very extensive plain, terminated only by the distant promontory of Licola, and said to be exceedingly unhealthy. Near Salerno indeed it is well cultivated, although chiefly in rice; but four or five miles beyond that town, it is one immeasurable swamp, rarely interrupted by fields or solitary dwellings. Lazy buffaloes, and large flocks of wild fowl, compose the chief population of this pestilential tract; and though the heaviness of the atmosphere, and the uniformity of the scene, invite to sleep, the traveller is kept awake by the fear of death attend-

them. Thus far goes the code; from which it is clear that whilst the Greeks possessed Calabria as tributaries to the Saracens, their governor chiefly commanded in Salerno; and no mention is made of any princes of Salerno, and particularly of any sovereign princes. But I know not how to reconcile this with the "*Series principum qui Longobardorum etate Salerni imperarunt*," taken from the MSS. of the Benedictine convent at La Cava, and published at Naples in 1785, by P. S. M. de Blasio, where those princes are made to reign until 1085 without interruption.

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ing upon his slumbers. I was amused by the sight of the distant mountains, whose acclivities are either cultivated or cloathed with wood. Broad vallies, watered by considerable rivulets, frequently intersect this mountainous chain, and leave a space through which the eye penetrates into the country, and discovers the towering points of the grand mass of the Appennines. No towns or villages enliven this tract of 25 miles, except the feudal town of Evoli; the royal hunting seat of Persano, with a forest 28 miles in circumference, and a few farm houses by the way side, whose inhabitants resemble wandering spectres. Upon quitting the highway, which was once intended to be made good as far as Reggio, I followed a cross road that conducts to Pœstum, between the sea and the great road; and as soon as I had traversed the river Sele (the Silurus of the ancients) I was revived by the sight of three temples majestically rising at a distance. These venerable remains of antiquity are neither sunk in hollows, concealed by woods, nor encircled
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by mountains, but command a full view of the sea, and the surrounding country; so that if it were true, as some travellers assert, that they were but lately discovered, it ought to be attributed to no other cause than the infrequent visitation of this part of the country by strangers. But it is not true that Pæstum lay buried in obscurity during several centuries; for I could prove, by references to various authors, that these temples were thought of almost in every age. But as they have been so often seen, and so well described, and drawn, by so many modern travellers, I may be allowed to spare myself the pains of entering into a very minute description of them.

The site of Pæstum was very fortunately chosen according to the practice of the ancients. The well preserved remains of the walls evidently prove that the town was of an oblong shape, and that one of its short sides fronted the sea, which there forms a bay, whilst the long sides followed the rise of the plain, so as to receive an amphitheatrical appearance, when
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viewed from the sea. The hills that approach the town are tolerably well cultivated, and behind them, not far from Pæstum, lies concealed the town of Capaccio, whose inhabitants report the water to be good, and the air by no means unwholesome.

The antiquity of Pæstum, which loses itself in the night of time, is manifested not only by the temples, but also by the town-walls, whose construction is similar to that of the walls of Syracuse and Manduria, and which have alone resisted the ravages of time, and of the christian and unchristian barbarians. The foundation of the town is indeed ascribed to the Dorians, who first established a colony in Italy; but the temples discover too sublime a taste to belong to a people at that time uncivilized; and I am rather inclined to coincide with those authors who place the construction of these edifices at that period when the Sybarites, driven out of their native city by the Thurii, seated themselves at Possidonia; at least they are highly worthy of the great degree of perfection to
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which the arts in that voluptuous city had attained. The Saracens are said to have destroyed the greater part of Positum in the tenth century, but to have left the public edifices untouched*, and it was reserved for Robert Guiscard to pull down most of those noble monuments of ancient grandeur, in order to prostitute the columns in the embellishment of his architeGonic misconceptions at Salerno.

For a particular and technical account and description of the temples, I refer the reader to "The Ruins of Positum, otherwise Possidonia, in Magna Græcia, published at London in 1767 by Miller," and to "*Le Voyage Pittoresque de Naples et Sicile.*"

I was much pleased with the interior architrave, adorned with acanthus leaves, in the temple that is nearest Naples, and is of the form called Peripteros; but the proportion of its length

* The four parts of the Arabia codex in my possession contains not a word relative to the destruction of Positum, although all the other considerable towns, either taken or destroyed, are carefully enumerated. They come down to the year 987.

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and breadth, being thirteen columns to fix, is certainly not beautiful. The shafts of the columns are terminated at top by astragals, and the neck of each capital is ornamented with foliage. The ceiling of the *prosaicos* is adorned with a sort of fret-work, in squares, one within the other, which gives it the air of a carved wooden ceiling in one of our old fashioned rooms. The triple socle is continued in the front of the *pronaos*, and forms a sort of peristyle, but without any traces of a colonnade. The walls, dividing the corridor from the *cella*, or interior part of the temple, are very distinct; but there are no vestiges of any columns, which were probably long since carried off. In general this seems to have been a very elegant temple, whose beauty displayed itself more when viewed near than at a distance. The contrary may be said of the middle or second temple, which is of the form or kind called *hypæthros*, and is so well preserved that not only the architraves, but even the metopes and triglyphs are still remaining. When

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seen at a certain distance, it has the appearance of a sublime, majestic structure; and the eye is extremely gratified by the proportion of 14 columns to six; but a mind, accustomed to a noble simplicity, will start at the number of component members; for the corridor, a triple division of the cells, and two rows of columns, one above the other, crowded into so small a space, create perplexity in the distribution, and give but a mean idea of the dwelling of a divinity; especially if we think of, and compare it with the Pantheon.

The exterior of such Greek temples as I have seen, pleases me in general as much as the interior of modern ones; and I here reflected with pleasure upon the remarks made by Milizia, and other ingenious architects, upon a comparison of the elegant with the early and rude styles of architecture. Their derivations seem extremely opposite; though I cannot conceive that the drops under the triglyphs were intended to imitate drops of rain, for in that case they would have been placed
directly

directly under the channels of the triglyph, and not under their femora, or interstices.

If we judge by its whole proportion, and particularly by the row of columns in the centre, the third and last edifice was not a temple but a structure, appropriated to some other public service. Like the first, it is much decorated in its component parts; and, in general, the fragments, that lye scattered around it, display a more refined taste than is to be seen in the temples at Segeste, or in that of Concord at Gergenti.

After examining these "splendid wrecks of former pride," I endeavoured to discover the famous roses of *Pestum**; but found nothing

* *Forſitan et pingues hortos quæ cura colendi
Dimittet caetera, hiſtorique roſaria Peſſi.*

VIRG. Georg. lib. iv. v. 118.

The wild rose, which now shoots up among the ruins, is of the small single damask kind, with a very high perfume; and, as a farmer assured me on the spot, it flowers both in spring and autumn.

SEVENTH VIEW, ſect. xxiii. a.

On y retrouve encore dans le jardin de quelques particuliers ces roses fameuses qui fleurissaient deux fois chaque année, et dont parle Ovide dans ses métamorphoses, l. xv.

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"Tepidique

but thorns and thistles, with a few fig-trees, loaded with excellent fruit. Although some travellers have asserted that all that grows about Pœstum has a saltish taste, I found that these figs had imbibed only the salt of sugar, but that the fume salso was indeed extremely salt.

After a frugal meal amongst the ruins, I commenced my return, during which I prevented myself from sleeping, by meditating upon the unwholesome air of the country, its causes, and consequences. Though much is to be imputed to the neglect of the inhabitants, who take no pains to keep within proper bounds the torrents flowing from the mountains, and to conduct them by canals into the sea; yet it is but too often a subject of regret in this kingdom, that so little attention is paid by government to the improvement of the country, and the in-

"Tepidique rosaria Pœsti."..... Ces roses ont deux saisons frées, où elles commencent à fleurir, le mois de Mai, et celui d'Octobre; J'ai vu moi-même des boutons prêts à épanouir sur Pœstum au mois de Novembre.

Lettres du Comte de Borgh, lett. 5. a.

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crease of population. Some allowance may indeed be made in a country consisting of arid and unfruitful hills in the centre of the continent; though even then we must not forget the fertilized sands of the frigid Prussian states, which would alone suffice to immortalize the reign of the great Frederic; but it is difficult to conceive that an extensive tract of land, upon the Mediterranean coast, not far distant from the capital, well supplied with water, and enjoying the advantage of a great road, should, in such a climate, remain so unhealthy, useless, and depopulated. As long as this country is thus administered, I can forgive the people of Salerno for continuing the cultivation of rice; but I am otherwise a declared enemy to it in Europe, because I think that the commercial advantages deriving from it, by no means counterbalance the mischief which it occasions to the country where it is cultivated. It generally enriches the trading inhabitant of the healthy city, but not the countryman, whose life is shortened by its cultivation.

I arrived in good time at Vietri, which I quitted the following morning on my return to Naples, taking in my way the Benedictine Abbey della Trinità, situated near La Cava. After ascending through a country like a garden, and through a thick forest of chesnuts, I reached a mountainous and sequestered valley, entirely overshadowed by trees, and watered by a murmuring brook. The founders of this abbey established their solitary cells under the shadow of a lofty cliff, where, far removed from the world, they consecrated their lives to prayer and holy meditation; but when their piety became known to the Lombard princes, reigning at Salerno, they, and their conquerors the Normans, contributed to make them break their vows of poverty, and of total seclusion from the world. Not only rich alms, but whole villages and districts, were bestowed upon those hermits whose gloomy caverns have been transformed into a spacious palace, in which 84 misogamists, of noble blood, find a most comfortable existence. But every friend to literature

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must rejoice at the preservation of this abbey, whose sequestered site has protected from pillage and destruction an almost unequalled treasure of documents, which have been deposited there during several centuries. The great Italian historians have drawn their best accounts from this admirable source, of whose purity they were fully persuaded; and these archives are inestimable, not only for the kingdom of Naples, and Italy in general, but for the history of all Europe. It was pleasing to observe in various documents the difference of style and character in different ages; and if circumstances had permitted, I would willingly have passed some days in this agreeable and interesting retirement. The value of this collection is much enhanced by the civility of the possessors, and their extreme readiness to indulge the inquisitive stranger with a scrupulous examination of every manuscript.

Between Nocera and Naples I had the most favourable opportunity of observing the

south side of Vesuvius, when I plainly saw that Somma and Vesuvius formerly composed only one volcano; but I defer enquiring into the changes and their causes until another opportunity.

SECTION

SECTION IX.

Travels through a Part of the Province of

ABRUZZO.

From NAPLES to AVEZZANO.

THE two provinces of Abruzzo are amongst the most unexplored parts of the kingdom of Naples, a circumstance which is attributed as well to the danger arising from robbers as to the want of a leading highway through the provinces. A road was indeed commenced a few years since; but the sequel of my journey will unfold why this country still remains as much unexplored as many parts of the most remote quarters of the globe. The insecurity as to robbers is not denied even in the provinces themselves, and though I cannot support the assertion by experience, the moral and physical causes were so clearly explained, as to leave me in no doubt upon the subject. The danger was represented to

to me at Naples in such strong colours, that I joyfully embraced the opportunity of accompanying Abbé Dalli, a worthy ecclesiastic of Avizzano, who, with two royal engineers, was sent to inspect the Claudian Emissario near that town, and we quitted Naples the beginning of October. The country between that city and Capua is too well known, to stand in need of description. The decline of agriculture, with some secondary causes, is the reason why Capua no longer bears the stamp of wealth, and it's consequent attendants: and in vain do we look for a striking copy of the ravishing pictures and descriptions left us of that district by the ancient authors; although indeed the neglected plains still bear some feeble traces of the voluptuous Capua. The volcanic soil undoubtedly contributed to the extraordinary fertility of the fields, which were enriched by the salt impregnated ashes of the long since extinguished but still visible volcano near Sueffa; and as the virtue of the salt is long since evaporated, a fresh eruption of that fiery mountain must

must take place, before Capua can become dangerous to another garrison.

After a few miles, we exchanged the road to Rome, for that to Venafrò, which was made for the purposes of the chase, by the late king, whose passion for that amusement was very beneficial to some parts of his dominions. The eye is fatigued with the unvaried scenery of corn-fields as far as Calvi, where it is offended by the nakedness of the rising Appennines, patches of which being planted with olive-trees, give sufficient proof that the whole chain might be clothed with that useful tree. Beyond Calvi, the country is diversified with oak coppices, whose groups are occasionally broken by corn fields, shaded by poplars and entwining vines. We now quitted the good road, and near a torrent called Pagliarona, 17 miles from Capua, struck into a cross road, where our carriage was most unmercifully shaken. We soon reached the forest of Presenzano, a considerable town, seated upon the side of a lofty hill, the situation of almost all the towns and villages whose environs

virons are unhealthy. In the morning the labourer quits his nest, and descends to the plains, where he patiently bears the heat of the sun during the whole day, without fearing any detriment to his health; but as soon as the evening commences, he flies back to his asylum, where he fearlessly abandons himself to sleep during the night; whereas one hour's repose upon the plains would be fatal to his existence. This effect is attributed to the *Mal'aria*, which signifies somewhat more than merely unwholesome air. During my abode at Naples, several travellers who ridiculed the dread which is entertained there of the *Mal'aria*, and who treated the effect of an almost unavoidable death, or at least of a most dangerous disorder, arising from sleeping in it, as a childish fancy, afterwards forfeited their lives to their incredulity and rashness. The most delightful parts of southern Italy are exposed to this pestilence; for, without mentioning the well known *Mar-remme Pontine*, this evil is common to the flat parts of the provinces of *Teramo* and *Abruzzo*;

Abruzzo; near the sea, to almost all the northern part of the Terra di Lavoro, to extensive tracts in Apulia, and the two Principati; to almost all the coast of the two Calabrias, and to a considerable part of Sicily. From the beginning of June to nearly the middle of November, those countries exhale a pestiferous and mortal vapour; and the unhappy traveller, who is there overtaken by sleep, quickly feels an universal lassitude and heaviness in his limbs, a painful head-ach, and want of appetite, the forerunners of a slow fever, which soon becomes putrid, and in a few days puts an end to his existence. Many physicians have assured me that it is almost impossible to free the body from the poison thus imbibed by breathing. The warmth with which the Neapolitans caution every stranger against this pestiferous air, and point out to him the places where he may repose without danger, does honour to their good nature. It may indeed arise in part from their dread of this merciless enemy; for, though as natives of the country, they may

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be supposed to be less subject to it, yet the cadaverous countenances, and short lives of those who are forced to reside in such situations, sufficiently prove that the Malaria is equally fatal to the natives. I cannot properly account for the origin of this pestiferous air; for although it chiefly prevails, and is of the most noxious kind in the morasses, from whence the sun draws up the fatal exhalations, yet large woody tracts, and extensive flat wastes, are also rendered uninhabitable by it; and it has even been proved, that dry and well cultivated, but flat and low tracts of land, are likewise subject to it. In short, the paradise of Europe, whose advantages so eminently distinguish it from our northern countries, is in this particular far behind our wild and rough, but healthy hills and vallies.

From Pagliarona to San Germano we travelled 18 miles of very bad road, chiefly through forests of oaks, which are only cleared away in a few spots, and cultivated in the manner customary in the Terra di Lavoro.

Between

Between Monte Leone and San Germano, we crossed a gentle eminence belonging to the south-east chain of that projecting part of the Appennines, which forms the valley of Monte Cassino. That valley is not indeed distinguished by that appellation in any geographical description; it not being customary in the kingdom, and the Appennines having no vallies with any peculiar distinctive name; but I term it so, because a great part of the conventual territory lies upon this chain, and the opposite one, upon which stands the celebrated convent of Benedictines. This eminence principally consists of a greyish-coloured clay; and here and there is seen a very foliaceous sort of slate, probably generated by the clay. Pieces of thick argillaceous stone, whose nucleus was become as hard as jasper, lay strewn about the beds of the torrents. Scarcely had we traversed this hill, than the pretty little town of San Germano, containing about 6000 inhabitants, appeared before us in a pleasant and well cultivated district. It is the capital

of

of the extensive lordships belonging to the convent of Monte Cassino, and deserves to be visited by every traveller, on account of the well preserved neighbouring amphitheatre, which, according to a lately discovered inscription, was founded, together with an adjoining temple, at the charge of a certain person called Umidia. From San Germano, I went up to the convent, which stands upon the summit of the mountain, at whose foot the town is situated. A steep zigzag road conducted me thither in an hour; and although it was late in the evening, my letters of recommendation opened the bolted door, and procured me that civil and hospitable reception, which I have constantly experienced in Benedictine convents. I cannot say any thing new relative to the tasteless magnificence, or the wealth of this convent, upon which several other travellers have so fully commented; but I beg leave to remind one who dwells upon what he thinks the excessive income of this religious society, that it supports an hundred monks, of whom several are men
of

of great learning and ingenuity, that above an hundred pilgrims are daily entertained there at the expence of the community; and finally, that more than half of the income amounting annually to 150,000 ducats (£.28,125) is paid into the royal treasury.

From Monte Cassino we followed the above-mentioned valley during ten miles, to Roccasecca, where we began to climb a mountain, and reached Santo Padre, a small town upon its summit, four miles from Roccasecca. The whole conventual territory hitherto is little cultivated, but chiefly covered with woods of oak; and the breeding of swine seems to form the principal occupation and subsistence of the inhabitants. The women were all employed in picking hemp with wooden machines, common also in the northern parts of Italy. Dark and melancholy countenances, miserable apparel, and dilapidated huts, did not indicate any peculiar degree of well being amongst these people.

According to its exterior appearance, the

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mountain,

mountain, upon which stands Santo Padre, consists of clay; but its summit is covered with a tolerably thick stratum of pudding-stone, wholly composed of pieces of limestone rolled and mixed together. The origin of this I leave to the geologists, and shall only observe that several of the high Appennines bear undeniable marks of a great inundation. The town, which is built of this pudding stone, offered nothing remarkable; but a hospitable citizen, who, like a patriarch sitting at his door, insisted upon our stopping at his house, and taking some refreshment; but having four miles farther of dreadful road to Arpino, we heartily thanked him, and proceeding on our journey, arrived late at that place, and not without imminent danger of our lives. An excellent supper, and agreeable company, at the house of a nephew of our worthy ecclesiastic, soon made us forget the fatigues and difficulties of the journey; and the polite and easy manners of the guests made me, perhaps hastily, decide upon the opulence of the town. But in fact

I was

I was not deceived; for it not only stands in a very fruitful and well cultivated country, producing corn, wine, and oil in abundance, but has upwards of an hundred cloth manufactories in a flourishing condition. They import their wool from Apulia, and their raw dying materials from abroad, but prepare the colours themselves, and manufacture a cloth that sells for 6 ducats—(£.1 2s. 6d.) the Canna*; and which, though so coarse that the opulent people in the town wear foreign cloths, is in great request amongst the lower classes. It is inconceivable that with such a considerable breed of sheep with the easy possibility of having the finest wool, and with the manufacturing spirit so peculiar to the inhabitants of the northern provinces, the kingdom of Naples should annually expend such vast sums in the importation of foreign cloths. As the opulent citizens of Arpino are chiefly engaged in the manufactories, the care of all the lands devolves upon the peasantry, except the olive planta-

* A canna is equal to 6 feet, 10 inches, and 2 lines English.

tions, which are farmed out for the half, or fourth part of their produce, according to their fertility. The town is seated upon rather a steep declivity, and contains 14,000 inhabitants. The busts of Cicero and Marius, in two niches in the square, are carefully shewn to every stranger; and the people are proud of enumerating those Romans amongst the former citizens of Arpino. But as much as, for various reasons, I respect the former, I certainly should not boast of having any thing in common with the latter. No true spirit of liberty animated him; and still less did heart-felt compassion inspire him with the disinterested and laudable ambition of relieving the people from the oppression of wealthy and abandoned tyrants; all his enterprizes and exploits were the offspring of insatiable ambition, of a mean jealousy and hatred of the nobility, and the opulent, and of a boundless love of sway; nor has he any other merit, in my eyes, than that of having set before the rich and well-born the imprudence of abusing those advantages; for his history has sufficiently

sufficiently shewn, that when a seduced and irritated populace withdraw their obedience and respect from order and the laws, they become the worst of tyrants, and the instruments of the very refuse of mankind *.

Arpino, and the whole country between Roccasecca and Campitrello, belong to the house of Buoncompagni at Rome. Although the estate consists of twelve lordships, or feudi, it does not produce more than 36,000 ducats — (£6750.)—a year; for the subjects pay no tenths, and the lord has no mills, presses, or similar exclusive privileges. But on the other hand he exercises the *merum et mistum imperium*, has two courts, before which his subjects must plead, and levies bridge and road money; but he enjoys only such rights as are usual in those provinces where the vassal is somewhat more free; for it appears that the northern Neapolitans, inhabiting the mountains, have

* For farther information, and conviction of this truth, the events during the greater part of the French revolution, will furnish very ample evidence. A.

not submitted themselves to the yoke of the feudal laws so much as the inhabitants of the southern plains.

We descended during an hour to Isola, a small town upon the Garigliano, the Liris of the ancients. Upon the road my friend Lolli pointed out to me a grove of olive-trees, and assured me that they were planted in his presence some years since, in holes made for that purpose in the solid limestone.

Nothing can be more truly romantic than the site of the old castle at Isola, which motives of safety probably caused to be perched upon the highest point of an island formed by the Garigliano. After a tranquil course, that river there divides into two limpid branches, one of which immediately precipitates itself over a perpendicular range of rocks, whilst the other rolls over an inclined and rocky bed, and hurries, in a rippling stream, to form a junction with the torrent. The re-united waters then re-assume their placid course, and meandering along the immeasurable plains of Aquino, where

where richly cultivated hillocks, scattered capices, and a prospect terminated only by the distant horizon, embellish the theatre of their course. It is to be lamented that the contemplation of the beauties of nature should be disturbed by the view of the town, extending itself upon the island immediately below the castle; and still more is it to be regretted that the proprietor of such delightful scenery should choose to bury himself between the walls of Rome, rather than enjoy these beauties of nature, so rare even in Italy.

As the Villa di San Domenico, a convent, which occupies the scite of one of Cicero's villas, is not far distant from Isola, we made a pilgrimage thither on foot. The beautiful and rich environs are on one side watered by the Garigliano, and bounded by gentle hills, whilst on the other side the eye penetrates far into a broad and fertile valley, from whence rushes the Fibrenus, which, before it mingles with the Liris, forms two branches, between which were the gardens of that celebrated orator.

This situation perfectly coincides with his description of this villa; but the shady walks, the thick groves, the house, and the extensive apartments, where some of his excellent performances were imagined, and where select society amused itself with philosophical conversation, are no longer to be traced, and have been usurped by a gloomy convent of superstitious and ignorant dominicans. Amongst all the country residences of that great orator, which I have seen, none was more conducive than this to the purposes for which he retired into the lap of nature; for here he might have enjoyed tranquillity and solitude, salubrious air, and the most delightful scenery; and what more can he wish for, who is engaged in deep meditation, or abstruse researches? I should wonder, with his friend Atticus, why he did not prefer this asylum to all others, did not an insatiable love of fame, conspicuous in all his actions, convince me that he only resided with pleasure where he thought he should shine.

We now continued our journey to Sorà,
situated

situated three miles to the north-east of Isola, and containing about 8000 inhabitants; but although there are still some manufactures of hats, paper, and saddle-girths, its former opulence is very much diminished. Its decline is attributed to the want of a highway, that would connect it with Naples and the province of Abruzzo; but although this Valley has an immediate communication with the ecclesiastical estate through Anagni, its situation does not appear to me to be well calculated for a ready passage into Abruzzo. The towns and villages however exerted themselves to induce the court to make a road through their district; and when they saw that notwithstanding all their endeavours, the road was commenced on the other side, they gave in the following memorial, which came accidentally into my hands, and deserves to be known as throwing some light upon the method of making roads in this kingdom.

* WE

"WE, the communities of the Marlian valley of Roveto, of the valley of Carsolo, and of the district of Cicoll, in Abruzzo Ultra, represent that we have not only petitioned your Majesty for the construction of a road from Campitello to Sora, but have also laid before your Majesty our important reasons for desiring it. Our lands are extremely fruitful, and produce much more than we can consume; but on account of the excessive badness of the roads, and the consequent impediments to traffic, we are deprived of the means of disposing of our superfluities. Industry is therefore checked, and the courage of the husbandman sinks, because he has no prospect of any profit arising from the effects of his labour. After laying before your Majesty these important reasons, together with the advantages which the post of Sora would derive from a new road, we strongly represented that it would greatly facilitate the transport of iron, which being brought by wagons from the royal mines to Sora, might be conveyed

conveyed from thence to Naples by water*. We had hoped that our petition would have met with the greater attention, inasmuch as the object of it would occasion no new tax, and might be speedily put in effect with the money actually paid by the province towards the support of the highways. Your Majesty was pleased to refer our petition to the chamber of roads, which upon the eighteenth of October, 1788, decided, that no attention should be paid to our representations, as the wished for road from Campistrello to Sora (whose length is only twenty miles) would cost 80,000 ducats—(£15,000.)—and the chamber farther observed, that if 6000 ducats—(£1125.)—were annually retained from the chest, destined for the completion of the road by Campo Basso, it was impossible that the two roads could be constructed at the same time. In our first petition we intreated your Majesty not to impart our wishes to the chamber of roads, it being suffi-

* The iron is now carried to Naples by mules.

ciently known to us that they always disapprove every project that can tend to weaken their influence over the road chest. It is now two years since the roads in Abruzzo were first commenced, during which period four provinces have paid above half a million of ducats—(£93,750.)—into the road chest; yet your Majesty will hardly believe that the road has been continued only thirty-six miles, from Velestino to Roccaraso. Thus each mile is made to cost 15,000 ducats—(£2812. 10s.)—whereas each mile of the truly royal road from Naples to Rome cost no more than 2000 ducats—(£375). That road is moreover twenty-four palms wide, and is constructed according to the rules of art, and for the service of posterity; whereas the Abruzzo road is only eighteen palms wide, and already begins to fall to pieces. The materials, and especially the gravel, for the Roman road, were fetched from a distance; but in Abruzzo, the latter was found by the way side. Neither is the expence of making the road to be attributed to the mountainous

tainous nature of our province; for the road chiefly traverses the flat parts of the country, and is only cut through a mountain about a mile and an half in length, near Portella and Barbatosa, at the commencement of the Piano di Cinque Miglia. Striking therefore as is the difference between the two roads, so much the more scandalous is the difference between 2000 and 15,000 ducats. Let your Majesty therefore judge, whether, in such circumstances, the petitioners must not be driven to despair, upon being deprived of all hopes of obtaining their wished for road. The chamber would indeed be fully justified in disapproving the construction of a road from Campistrello to Sora, if it were to be made in the same manner as the other; for this tract of twenty miles would cost much more than 80,000 ducats, if the superintendance of it were entrusted to the same engineers, whose conduct proves that they know no bounds in the profuse expenditure of the public money. If the chamber had justly and impartially considered the advantages which

the

the road desired would procure to more than 400 communities that must otherwise fall into decay, and had taken into proper consideration the transport of the iron, they would not so hastily have condemned the proposal. It is malicious to declare that the road would cost 80,000 ducats; for experienced and honest engineers have estimated the expence at only half that sum.

"May it please your Majesty, therefore, annually to allow us 8000 ducats out of the chest, that we may in five years compleat and enjoy the so much wished for road, and graciously to give us as engineer, Captain Roberti, well known as a man of probity and experience, together with an overseer, to manage the accounts with exactitude and honor. And your petitioners shall ever pray, &c.

(Signed)

SORA; POGGIO PHILIPPO;
TAGLIACOZZO; ROCCA DICERRO;
PIETRASECCA; PAGLIA;
SCANZANO; and
SANTO DONATO; CAMPISTRELLO."

Although

Although I must repeat that the communication between Naples and Abruzzo cannot be kept up through these communities so advantageously as by the other road, yet every traveller through this part of the kingdom must allow, that a good road to this part of the province is very necessary, and that it might easily have been made with the money which in various ways was lavished upon the other. As Sora is situated in a very fertile country, it is to be wished that the inhabitants would occupy themselves more with agriculture than commerce; since by their communication with the plains, they might always find a market at Rome and Avezzano. Should the intended project about the road prove successful, and the river Garigliano be at the same time made navigable, it is to be hoped that the dams thrown across the river for the benefit of the mills, will be destroyed; for they have already caused such an accumulation of sand and stones above the town, that it is annually exposed to inundations;

tions, and even its total ruin might be occasioned by a too sudden swelling of the river.

Beyond Sora, where we were hospitably entertained by a very civil gentleman, who has a room full of antiquities, the valley begins to narrow, and assumes the name of Valle di Roveto, to which it is justly entitled, being almost one continued forest of oaks. The gradually diminishing surface of the valley is entirely subject to the river which wanders through it in oft-repeated windings; but its ravages are stopped by gently projecting hills, crowned with villages and corn-fields. Behind them, rise high mountains, of which those towards the east are chiefly bare, but those to the westward, forming the borders of the ecclesiastical state, are clothed with thick woods, inhabited by bears, wolves, lynxes, and highway robbers, the most noxious of all beasts of prey, who, living upon the confines, render this one of the most insecure parts of the kingdom.

The

The road was so bad that it was late at night before we reached Civitella, only fifteen miles distant from Sora. Here also we were indebted to disinterested hospitality for our lodging and supper, and particularly for some of the delicious trout out of the Liris. But this is all I have to say about that inconsiderable place, which we quitted early next morning, and soon arrived at the village of Canestro, which signifies a basket, and probably takes its name from the great quantities of baskets annually made there. The valley is here extremely narrow, and is almost shut up by a projecting rock, upon which stands a town called Pescio Canale. (Pescio, in the dialect of this country, signifies a rock). At the end of five miles we reached Campistrello, hanging upon the side of the eastern chain of hills, and famous for the vent or termination of the Claudian Emissario, which I shall hereafter fully describe. I must not take leave of the Valle di Roveto without remarking, that it produces both wine and corn, amongst which

in the meadows, or millets, and that a few olive plantations are also to be seen there. But the breed of swine is the main article of rural economy, and the sweetest salted tongues, hams, and sausages, and especially the *Varina*, so celebrated throughout Italy, are prepared here. The latter consists of the part of a sow, which are most delicate when cut off the living animal. This cruel operation is upon a level with that practised by the inhabitants of Mazara, in Sicily, who sew up the fundaments of their sows, in order to make their livers extremely large*. But not only the stigmatized Italians, but also other civilized and polished nations, whose writings breathe nothing but humanity, torment animals, in cold blood, in order to gratify the palate; whilst the barbarians, as they are termed, neither know nor practice any similar kind of cruelty.

* The *paté de foie d'oie*, which is made at Strasbourg, and sent to all parts of the continent, are composed of the livers of geese, swelled to a prodigious size, by various torments practised during some months upon those animals. I am told that the Jews at Strasbourg are chiefly concerned in that business. A.

Instead

Instead of following the course of the valley, we gained the highest point of the mountain above Campitrello, and passing through a hollow, soon found ourselves upon a wide uncultivated plain, surrounded on three sides by hills, chiefly covered with woods. Although it is open on one side, the road to Avezzano traverses a steep hill, called Monte Salsiano, from the sage which grows upon it in great abundance. Tedious was the plain, and tiresome the ascent of the hill, but ravishing the prospect from its summit. A lake more than thirty miles in circumference, in the midst of such arid mountains, was an unlooked for object; and this sheet of water was encircled by a number of towns and villages, scattered over the well cultivated plains, sequestered in fruitful amphitheatres, or situated upon bushy elevations; whilst the back ground was formed by a circle of mountains, amongst which the Velino, the Gran Sasso d'Italia, and the Majella, seemed to brave the skies. Thrice have I contemplated this prospect, whose resem-

blance to my native land ever filled me with pleasure and delight; but, as an impartial person, I cannot agree with an English author, that it surpasses in beauty all the views afforded by the Alps of Switzerland; for the clearness of the atmosphere, the brilliancy of colouring, and the variety of objects that particularly distinguish every great prospect amongst the mountains of Switzerland, will in vain be sought for here. I could have continued to feast my eyes upon this prospect, had not my companions, eager for their dinner, hurried me away, and in less than half an hour we arrived at Avezzano.

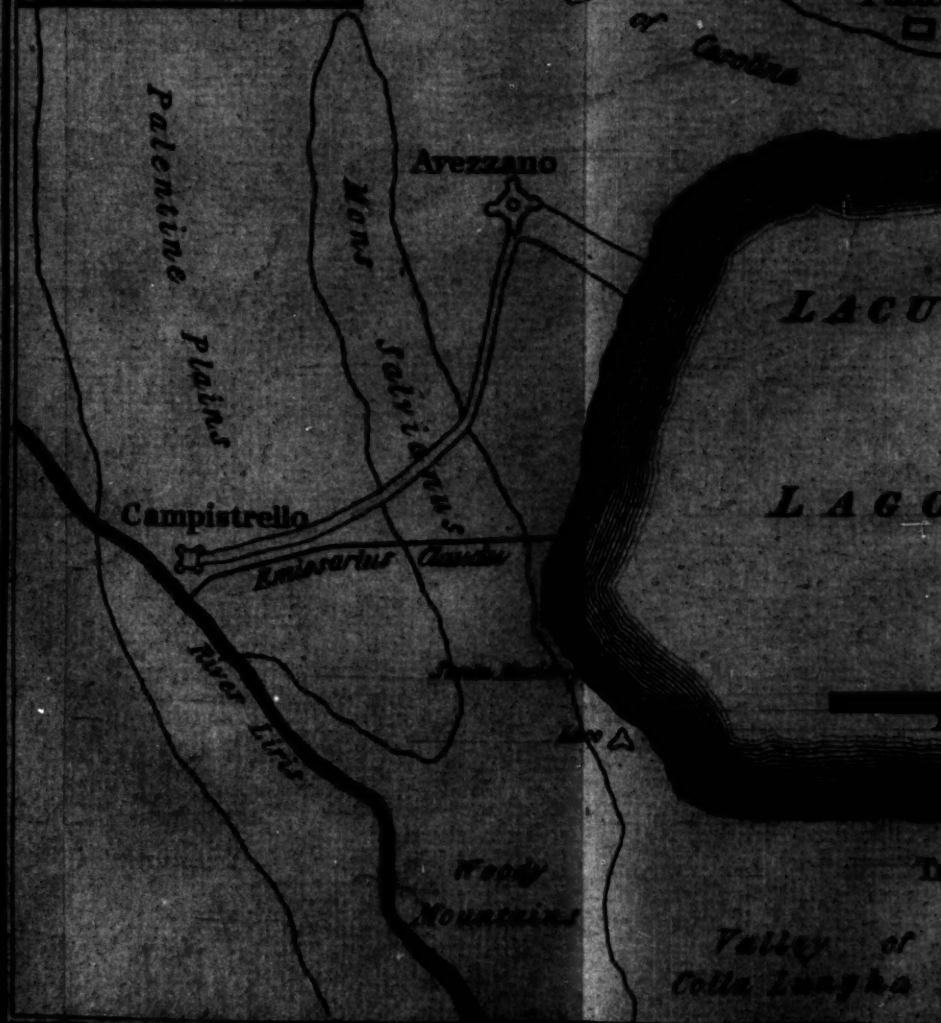
SECTION

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 might be here. I could have continued to
 say more upon this subject, but I am
 now more eager for the dinner party
 than, and in less than a week we will

Adieu.

15. The dotted line points out the territory that might be gained from the Lake by repulsing the Emicauris.

15. The dotted line points out the territory that might be gained from the Lake by repulsing the Emicauris.





SECTION X.

The Lake of CELANO, with its Environs.

IN order to render the description of this lake more intelligible, I have added a small chart of the lake, and surrounding country, taken by my companion, Don Ignazio Stilo, the royal engineer (Plate IV.) This is a district almost shut out from the rest of the world; being entirely surrounded by mountains, except towards the west, where through the valley of Cefolina, by Tagliacozzo, and along the Salto, it communicates with the Roman state, and with Campistrello, and the valley of Roveto, across the Palentine fields. There are also roads from Celano to Aquila, and from Pescina to Salmona, in the north and north-east parts of Abruzzo; but very high mountains must be ascended in order to get

out of this basin; and indeed the shortest way to Campitrello traverses the Monte Salviano, as I have already mentioned. Upon every other side are nothing but dangerous foot-paths, leading into uninhabited and unfrequented mountains. Notwithstanding Celano gives its name to the lake, Avezzano is considered as the chief place of the district; for although it is but a small dirty town, containing only 3500 inhabitants, it has a baronial castle, several convents, and some handsome private houses, amongst which, those of my generous host, Don Vincenzo Minucuccio, and of the family of Mattei, are the most considerable. It is situated in a fertile and delightful spot, about a quarter of a mile from the lake, which annually draws nearer to the walls. The inhabitants are chiefly engaged in agriculture, and especially in the cultivation of the almond-tree, and vines. The method of making wine here is somewhat singular; for after the grapes have been pressed, and the liquor poured into casks, a little must is boiled, and mixed with
it;

it; which, as they pretend, contributes to its keeping. White wine is the general produce, and no must is mixed with the small quantity of red that is made; but the grapes are left to ferment in tubs, and the casks are carefully replenished every day. The wine was very pleasant, and seemed full of spirit; which I attribute to the pieces of lime-stone that are mixed with the soil. Not only all kinds of grain are cultivated here, but to my great surprise I saw several acres of potatoe ground. Fruit trees, of every sort, give shade to the corn fields; and I tasted peaches and pears, of the most delicious flavour. The thrifty inhabitants cultivate their lands themselves, and find their account in that exertion of their faculties. In general I was much pleased with what I observed of the character of these people during the eight days I passed amongst them; and if I may judge of the rest of the inhabitants, by those with whom I had a closer communication, I am not deceived in my conjectures. I was received by a numerous family, like a beloved

X 4

relation;

relation; and the master of the house, who possesses and knows the resources afforded by a chosen library, his two brothers (of whom one is canon of the Rotonda at Rome), and his two sons, took all imaginable pains to point out to me every thing that could forward the purport of my pursuits; whilst the lady of the house, an amiable matron, contrived to render agreeable every moment that I passed within doors. Her two daughters, though under twenty years of age, had already taken the veil in a convent, whither their mother conducted me, and I was not a little astonished at finding so much beauty, elegance, and ease, with such noble and fine sentiments, in this sequestered corner of Abruzzo. When an Italian female unites the softer virtues to brilliancy of expression, and elegance of form, she certainly approaches ideal beauty as much as any woman in the universe.

As Avezzano offers little interesting to the traveller, I began my wanderings with a visit to Alba, which occupies the three pointed summits

summits of an isolated eminence, two miles to the north-west of that town. Alba was the capital of the Marfi, a warlike people, who, according to the ancient authors, were dispersed around the lake, and over of without whom the Romans are said never to have triumphed. To the peculiar situation of this town were they indebted for their preservation from conquest by the Romans, who, though inexperienced in the art of sieges, generally proved successful by perseverance. When the Marfi became the allies of that people, Alba served as a state prison, where Perseus, Syphax, and other victims to the republican love of conquest, terminated their unhappy lives*. As

* Strabo speaks of the Alba Marforum, lib. v. Trad. Guarini Veronens. Edit. Henr. Petr. Basil, 1549, fol. Ultra hæc dictæ prius urbes latinæ viæ sunt, e quibus in Mediterraneæ maxime latinæ inter urbes, sita est Alba Marfis finitima in excelsio locata saxo.

Albensium Alba ad Facinum Lacum.

PLIN. H. N. lib. iii. cap. 12.

The commentator upon Antoninus justly calls it Alba Fæcentia, and not Tuccatia; for the town evidently received that addition from the Fucine Lake, in order to distinguish it from Alba Longa.

Strabo,

a spot so classic and so remarkable merited my most earnest attention. I commenced my researches with that eminence upon which modern Alba exhibits but a melancholy remnant of the ancient. Its dilapidated huts merit indeed no observation; but in the church I discovered a picture of the annunciation, which though by an unknown master, is not only in my judgment, but in that of Sir William Hamilton, worthy to adorn a temple in the capital. It is not a little remarkable, that the last representative of the Counts of the Marfi, so powerful in former ages, now resides amongst these dilapidated walls, in the character of an ecclesiastic. The prospect from this summit is extremely limited, comprising a plain only one mile broad, and two insignificant hamlets backed by the Velino. That mountain, which is a giant amongst those of Italy, consists entirely of

Strabo, Livy, Velleius Paterculus, Valerius Maximus, and many others assert, that Alba was used as a state prison for conquered kings.

lime-stone, and is so exceedingly rocky, as to produce but little food for sheep, and none of the delicious herbs so frequent upon the Majella. No torrents embellish it upon this side; but upon its northern declivity it has several springs that compose the river Velino, which, after watering a part of Abruzzo, forms the celebrated cascade della Marmora, three miles above Terni, and discharges itself into the Tyber, some miles below that place. Upon the second point, adjoining to the other, stands part of an old tower, whose mode of construction classes it amongst the rude fortresses of the middle ages. In my way to the third eminence, which is the highest and most remarkable, I found various considerable remains of the ancient walls, whose construction differs entirely from that which I have observed in the walls of old Greek towns, as Syracuse and Manduria, as well as from that of the ancient walls of Rome, and other Roman cities. Polygonal blocks of stone, frequently of very large dimensions, and only hewn even at the angles, and

and on the side exposed to view, are so nicely put together, that no interstices remain between the stones; and though the courses and joints have an irregular appearance, the wall is perfectly smooth. There are no traces of iron or cement; and even in the gateways, and where the wall winds round the hill, it is only made thicker, without any alteration in the mode of construction. This method appears so durable, that I am not surprised at the walls having so long withstood the ravages of time. The extent of their remains gives reason to conjecture that the ancient town occupied the three several points of the Hill; and this conjecture is confirmed by various ruins found within the circuit of the walls, amongst which, the traces of an amphitheatre, and vestiges of baths, are perfectly discernible. Coins, and pieces of mosaic work, consisting of white marble, and blue or green glass, and sometimes of marcasite, are also dug up there in great quantities.

The Friar Conventuali have erected a charming

ing dwelling upon the summit of the third eminence, where, under the shade of some delightful nut-trees, stands their solitary convent, and a small church, wholly constructed of the fragments of the more splendid edifices of antiquity. Columns, whose capitals discover either Doric simplicity, Ionic neatness, or Corinthian superfluity of art, cordially and without jealousy support a miserable roof, whilst the cleft walls of the building display fragments of beautiful marble, decorated with the elegant performances of an accomplished chisel. The pavement of some parts of the church presents to view the most uncouth and barbarous figures, composed of pieces of the mosaic, so abundantly found here, and which were once employed in the representation of figures, fruits, flowers, and other pleasing ornaments, in the cool apartments, or pleasure breathing baths of the ancient inhabitants of Alba. The situation of the convent is rendered delightful by the picturesque prospects it commands; for this hill, whose summit is covered with flowery pastures,

pastures, and whose base is surrounded by vineyards and fruit-trees, overlooks on one side the mirror-like lake, and its cheerful borders, and on the other, the whole valley of Cesolina, which leads to Tagliacozza, and along the Salto to the valley of Rieti, in the ecclesiastical dominions, where the high and woody mountains, from whence spring the Garigliano and the Salto, at once bound the kingdom, and the prospect. Towards the south we see the Palantine fields, the little town of Scurcola, and the ruins of the abbey of Santa Maria della Vittoria, a melancholy monument of the victory obtained by Charles of Anjou, over the unfortunate Conrad of Hohenstauffen. hateful in my eyes was the traiterous hill of Salaria, behind which lay in ambuscade the party that decided upon the life and fortune of the too impetuous prince; but still more hateful was the woody summit that conceals the castle, where was practised the basest of all crimes. Gloomy thoughts overpowered me when I reflected upon the events of that melancholy story,

story, and forgetting the beautiful scenery that lay before me, I turned with indignation from this theatre of treachery and misfortune.

Upon the opposite side, the naked base of the Velino is enlivened by several villages, and particularly by Magliano, which, in Alba's prosperous days, furnished that city with works in copper, and in iron. The vicinity of this eminence to the Roman territory, made me think it an admirable position for a frontier fortress; for two of its points are abundantly furnished with excellent water, the surrounding mountains are too distant to command the height; and the country, capable of a still greater degree of cultivation, the lake well stocked with fish, and the adjacent woods, would ensure an ample supply of provisions to a garrison. It is not indeed to be suspected that either a priest, who is the Prince of Peace, or his subjects, who are Romans only in name, should ever entertain thoughts of making conquests in the kingdom of Naples; but a Julius the Second, or an Eugenius the Fourth, may again

again wear the triple crown, or unexpected changes may take place in the governments of Europe. The kingdom is at present wholly exposed on the land side*; for neither Gaeta or Capua could stop an army, and not a single fortress covers the confines of Abruzzo. Even if the fortress had no opportunity of displaying its strength and utility in the resistance of an enemy, a garrison would be of no small service to the country, whose superfluous productions would there find a constant market, whilst ground actually lying waste might again be cultivated, and the now barren Salviano resume its ancient covering of chefnut-trees. The iron mines referred to in the memorial about the road, and the coal mine newly discovered in the mountains, where rises the Garigliano, and said to be of an excellent quality, might then also be worked with the greatest advantage and success.

* And with respect to the sea, even the capital itself is exposed to the insults of an hostile navy; as the fleet of England, in 1745, and that of France, in 1793, sufficiently evinced. A.

Upon

Upon one of the following days I visited the lake and its environs, and directed my walk along the strand, in order to inspect some of its particularities. A large snake, *Coluber Berus Linnæi*, which was shot by my companion Lolli, turned our discourse upon the subject of the animals most common in that neighbourhood, which abounds with snakes, and particularly asps, *Coluber Aspis Linnæi*, of which we saw several; they are small, but extremely venomous, and are found in great numbers upon such of the lofty calcareous mountains as are covered with the most fragrant aromatics. Several strangers annually come here, and carry off great quantities of these reptiles, which they sell to the apothecaries in different parts of Italy. This conversation conducted us to a small bay, called la Pedogna, where the lake is said to have a subterraneous discharge. I shall afterwards endeavour to decide upon the truth of this report, and shall only remark at present, that the ancients thought it a sacred spot, and

Y

erected

erected upon the strand a temple to the goddess Pitonia, out of gratitude to that benevolent divinity who prevented the continual increase of the lake. I do not pretend to determine whether their posterity be more ungrateful, or whether they have discovered the inutility of sacrifices; but every trace of the temple has disappeared, and the remembrance of it is retained only by the appellation of the bay. From hence the lake stretches to the foot of Monte Salviano, and the road is carried along its side. Large masses of wall here pointed out the ruins of the ancient Penna, of which much more is discernible in those years, when the lake considerably decreases*. In the midst of the ruins is a church, mentioned by Synesius and Leo Ostiensis, the construction whereof proves that it was erected shortly before the time of those authors. We now descended to

* I can find nothing relative to Penna, except in Marsuri's notes upon Leo Ostiensis. See *Rerum Italica Scriptores*, tom. iv. p. 242, where he mentions Penna amongst the destroyed Maritan towns.

the borders of the lake, and got into a boat, which was to convey us directly to Trespacco (or Transaquas). Not far from the ruins of Penna lies Luco, the ancient *Lucus**, a miserable village, whose once beautiful fields are now covered by the lake, as far as the dwellings of the inhabitants. These people subsist chiefly by the fishery of the lake, which is farmed out for half the profits by the two proprietors, the houses of Colonna and Cesarini, at Rome. Some benefit also arises to the inhabitants of Luco from their trade in wood; for the Salviano unites above the village with a branch of the Appennines, and forms a mountainous district of considerable extent, chiefly covered with woods, very thickly inhabited by bears, lynxes, wild boars, and other beasts.

* Amongst the *Marſi*, Pliny also reckons the *Lucentes*, lib. iii. cap. 12. If we agree with other writers in deriving the name of *Lucus* from a grove consecrated to a divinity, it is probably that which was sacred to the goddess *Angitia*, mentioned by Virgil in his 7th *Æneid*, v. 759.

*Te nemus Angitia, vitrea te Fucinus unda
 et Te liquidi fluvius Lacus.*

Whilst we glided along the smooth surface of the lake, one of my companions shot two small ducks—*Colymbus auritus* Linn. and a coot, *fulica atra* Linnæi. We also saw several wild ducks, *Anas boschas*, and other water fowl, with which I was unacquainted; and Lolli assured me, that the lake was constantly visited by all kinds of water fowl. It is said to be equally stocked with every sort of fish; but their names were so peculiarly provincial, that it was impossible for me to compose a systematic catalogue. Upon the tables of my friends I saw nothing but pike, carp, and tench; nor could I learn any thing satisfactory about the eight finned fish mentioned by Pliny*. The lake is generally very tranquil, and little subject to violent storms; but the north-east wind sometimes blows with such force, as to make the navigation dangerous for the small vessels that are upon it. Towards noon we landed at

* In fucino tantum lacu piscis est, qui octenis pinna natat.

Trafacco, a considerable village, containing about 800 inhabitants, who are all husbandmen, and situated in a very fruitful spot, abounding in corn, almonds, and wine, which last is sent across the lake to Avezzano; as soon as it is put into barrels. The lake has also made great ravages in this district, which chiefly belongs to the citizens of Avezzano, many of whom have country houses here, in which they occasionally reside. This dirty village contains nothing remarkable, except some remains of a Gothic edifice, and a tower, called *La torre d'Agrippina*, in which it is pretended that the Empress Agrippina resided, with her husband Claudius, during their abode in this part of the country. As I find nothing of this in any ancient author, I shall pass over it with observing, that the upper part of the tower is unquestionably of Gothic architecture. Various ancient inscriptions might be collected here; but Phæbonius is said to have given copies of them in his history of the Marfi. Behind Trafacco is a valley that stretches far into the mountains,

mountains, which have nothing to display but widely extended wastes, plentifully stocked with wild beasts.

We re-embarked after dinner, and proceeded higher up the lake, in order to have a distinct and successive view of the different places that surround it. Eastward of Trasacco the lake is checked by the steep and barren mountain of St. Nicholas, behind which the learned of this country place the ancient city of Archippe. That such a city stood near the Fucine lake can easily be proved; but its precise situation still remains an undecided question*. Where

* Gellianus auctor est, lacu fucino haustum Marforum oppidum Archippe, conditum à Marſya Duce Lydorum.

PLIN. H. N. lib. iii. cap. xii.

Archippen Regem Lydorum hyatu terre haustum dissolutumque dicant in lacum fucinum.

SOLIN. lib. ix. Edit. Drandius, 1603, Francofort, 4to.

Another edition of that superficial author says, "Archippen a Marſya Rege Lydorum, quod hyatu terre haustum, dissolutum est in lacu Fucino.

SOLIN. Edit. And. Reiherus, Gotha, 1665, 8vo.

Quin et Marruvia venit de Gente Sacerdos,

Fronde super galeam et felici comtus oliva,

Archippi Regis missu, fortissimus Umbro.

VIRG. Æn. lib. vii. v. 750.

the

the base of St. Nicholas loses itself in the water towards the east, the lake forms a deep bay, at the bottom of which the town of Antuchio displays itself, seated upon an island. A few years since, it was connected with the main land by a most fruitful plain; but the all-devouring lake has not only invaded the plain, but now daily storms the towns, still clinging to the island, and has already so undermined the once magnificent castle, that its fall is hourly expected. The inhabitants, to the number of a thousand, being thus deprived of the finest part of their property, and not finding sufficient employment in the cultivation of the fertile but too confined valley on the opposite side, have now devoted themselves to the fishery. Some miserable huts near a considerable stream, which running down from the Furca Carosa, discharges itself into this lake, are the first habitations of man beyond Antuchio, and bear the name of San Benedetto.

Marruvium, the capital of the Marfi, is said to have been situated here; considerable re-

maine are found in the immediate environs; and when in the year 1752 a remarkable drought had greatly diminished the lake, various ruins were discovered, and the fine statues of Claudius, Agrippina, Nero, Hadrian and his consort, were dug out, and carried by the king's order to Caserta. In the time of Claudius, this town bore the name of Valeria, which it afterwards changed for that of Marzia*.

* Marruvium is mentioned by a variety of authors. Though Strabo speaks of it—lib. iv.—he does not very clearly point out its situation, which however may be guessed at from what he says about it. Cluverius is certainly mistaken in placing it where Morrea now stands, in the Valle di Roveto, opposite to Civitella. Sigonius in his treatise "*De Antiquo Jure Italico*," tom. v. p. 345 (in which he throws much light upon the history of the Mars), clearly proves that Morrea was inhabited by the *Aequicoli*, and not by the Marsi.

Silius Italicus says, in his 8th book,

Marruvium veteris celebratam nomine Marsi,
Urbibus est illis Caput; interisque per ades
Alba fedet Campos, pomisque rependet aristas,
Ceteræ in obscura famæ, et sine nomine valgi,
Sed numeræ Castella valent.

Pliny also mentions the Marruvii, lib. iii. c. 18. In the Peutingerian map, Marubio occupies the place of the ancient Marruvium. It is called Valeria by Antoninus. In general

The whole northern shore of the lake exhibits nothing but a mixture of marshes and well cultivated fields, without any habitation between San Benedetto and Avezzano; but about a mile from the lake, upon ground rising amphitheatrically, at some distance from San Benedetto, are seen the town of Celano, and beyond it, the village of Paderno, behind which the proclivities of the Appennines appear cloathed with olive-trees, and watered by a rivulet, which, after passing near the walls of Celano, discharges itself into the lake below. During our navigation round the lake, I observed that several streams emptied themselves therein, but could never discover any outlet for its waters; a circumstance the more surprising, when we

general, Muratori has given a copious account of the Marlian towns, in his *Script. Ret. Ital.* t. x. p. 293. But Phezbonius, in his *Hist. Marforum*, would have furnished me with far more extensive information, could I have procured the book.

I am surpris'd that M. de S. should call Alba the capital of the Marsi, when it appears that Marravium was in fact the capital, as he himself afterwards says. A.

consider

consider the great extent of the lake. Having already mentioned that the lake belongs to the two houses of Colonna and Cesarini, I shall here observe, that the part between Paderno and Trefacco belongs to the former, and the eastern side to the latter family, and that the proprietors are as much limited in their rights and privileges as the house of Buoncampagni is at Isola.

To the natural history of this unknown part of Italy, belongs the preparation of excellent arquebusade water at Avezzano. My hostess possessed the art of making it in great perfection, and gave me some with which I have cured some recent wounds, by only washing the part affected, and binding it up with compresses, well steeped in the arquebusade. The herbs with which she makes it, are gathered in part upon the Velino, but principally upon the loftiest points of the Majello. The surrounding mountains are so renowned for their abundant production of all sorts of simples and vulnerary herbs, that they are annually frequented
by

by apothecaries and cullers of simples from distant parts of the country. Even in times of remote antiquity the Marlian mountains enjoyed the reputation of producing the choicest herbs; and I am almost inclined to think, with the commentator upon Leo Ostiensis, that the whole fable of the goddess Angitia, who is said to have had a temple in a consecrated grove near Luco, and to have taught the inhabitants the art of curing maladies by means of simples, may be deduced from this abundance of vulnerary herbs. Neither is it improbable that the use which the Marfi made of these simples, and especially the quackeries, which perhaps their priests carried on by their means, procured them the titles of forcerers, and cures of venomous bites. It is singular, however, that the above-mentioned commentator should declare all traces of that science to be obliterated in this neighbourhood; since it is well known that the arquebusade water has been made there during a long period of time; but on the other hand I agree with him, that the magic healers
of

of venomous bites are no longer to be met with*.

• Vipereo generi, et graviter spirantibus hydriis,
Spargere qui somnos cantique manique solebat,
Malorbatque iras, et morsus arte levabat.
Sed non Dardania medicari cuspide ictum
Evaluit; neque cum jevero in valera cantus
Sonniferi, et Maris quæsitæ in montibus herbas.

This is the continuation of the passage in Virgil, quoted in note, p. 326; and precedes that quoted in note, p. 323.

Angitiam vicina fucino loca occupavisse, ibique salubri
scientiâ adversus morbos resistentem cum defisset hominem
vivere Deam habitam.

SOLIN. Edit. 4to. lib. ix.

In the other edition it runs thus—Cum defisset intus ho-
minem vivere Deam habitam.

Gentem Marforum a Serpentibus illesam esse nihil me-
riam; a Circes enim filio hi genus ducunt, et de aritâ po-
tentis debere sibi—sciunt servitium ventorum, ideoque
Venena contemnunt.

SOLIN. Ibid.

..... nec vocata mense tua
Maris redibit vocibus.

HORAT. Epod. v. v. 75.

Crates Pergamenus in Helleſponto circa Parium, genus
hominum fuiſſe tradit, quod Ophiogenes vocat, ſerpentum
iſtus contactu levare ſolitos, et manu impoſita venena extra-
here corpore. Varro etiam nunc eſſe paucos ibi, quorum
ſaliva contra iſtus ſerpentum medentur. . . . Simile et in
Italia

Italia Marforum Gentis duxit, quos à Circe filio ortos ser-
vant, et ideo inesse iis vini naturalem eam.

PLIN. H. N. lib. vii. c. 2.

Sicut contra serpentes Pfyllis Marisque inter homines.

Idem. lib. xxi. c. 13.

Certe quid non replevere fabulis Colchis Medea, aliaque,
in primis Itala Circe, Diis etiam adscripta? Unde arbitror
natum, ut Æschylus à vetustissimis in poetica refertam Italiam
herbarum potentia proderet, Multique Circeios ubi habi-
tavit illa, magno argumento etiamnum durante in Maris à
filio ejus orta Gente, quos esse Domitores serpentium constat.

Idem. lib. xxv. c. ii.

..... At Marfica pubes

Et bellare manu et chelydriis cantare soporem:

Vipereumque verbis hebetare et carnine dentem.

Ætas prolem Angitiam mala gramina primam

Monstravisse ferunt tactuque domare venena.

SILIUS ITALICUS, lib. viii.

SECTION XL

Of the CLAUDIAN EMISSARIO.

THIS noble monument of Roman grandeur is so little known, that I almost consider it as a duty not only to relate the motive of its construction, and its general history, as clearly as I can collect from the authors of antiquity, but also to describe its present state with all possible accuracy. It appears indeed very singular, that it should have been silently passed over by every Roman author, except Suetonius, Pliny, and Tacitus, and that amongst all the modern historians and describers of Italy that I have turned over, I should only find an account of it in Cluverius. Indeed Phæbonius in his history of the Marfi, and Lodovico Antinoro in his "Raccolta di Memorie Istoriche riguardanti l'Abruzzo," have assembled every
passage

passage relative to the emissario, of which the latter has also given some designs; but as I could never purchase those works, and had only an opportunity of slightly inspecting them, they have been of little service to me; although in fact I am inclined to think that they would not have afforded me so much real information, as doubtful and quaint accounts, enveloped in a mass of useless and prolix erudition.

The Lacus Fucinus was known in the earliest times, and was observed to possess the singularity of receiving much water, without having any apparent discharge. At some periods it visibly diminished, and at others augmented so as to do great damage to the dwellers upon its banks. Under the consulship of M. Æmilius and Hostilius Mancinus it rose so high as to inundate 5000 paces of the surrounding country*. As the decrease of the lake was owing to a very dry summer, rather than to an

* M. Æmilio et Hostilio Mancino Coss. A. R. 617. Lacus Fucinus per millia passuum quinque quoquo versum inundavit.

JUL. ORSINO, de Prodigis, lib. i. c. 83.

unknown

unknown issue, it annually spread itself, and not only devoured large tracts of land, but even houses, villages, and towns. The Marſh turned themſelves in their affliction towards Julius Cæſar, and intreated that the reſt of their country might be ſaved by making an outlet for the increaſing waters of the lake. That great man aſſented to the juſtice of their complaints; and amongſt other projects, intended to let off the waters of the lake, had not his untimely death prevented him*. The diſtreſſed inhabitants then made frequent and preſſing application for relief to his ſucceſſor Auguſtus; but difficulties and obſtacles alarmed that timid tyrant, who reſiſted their intreaties†. In the mean time the ſurface of the lake daily augmented; and a contemporary author tells

* *Emittere Focinum lacum.*

— SUTTONIUS, in Jul. Cæſ. cap. 44.

† *Emiſſariam ſucini lacus, portumque offiſicæ; quam ſcitæ ex his alterum ab Auguſto precantibus aſſidue Marſis negatum, alterum a D. Julio ſuperius deſignatum, et propter difficultatem omiſſum.*

SUTTON. in Claud. cap. 20.

as that near Alba, the Fucine lake spread itself like a sea, and was eminently useful to the inhabitants; that it sometimes advanced as far as the mountains, and afterwards retreated, leaving the lands dry, and capable of tillage; but that, though the waters were carried off by some unknown subterraneous passages, their augmentation was frequently renewed*. This quotation sufficiently proves that the complaints and assertions of the Mariti were well founded; neither could the discharge of the waters have been of much service; for when the Tyber caused such great inundations, during the reign of Tiberius, they were attributed to the extraordinary encrease of the Fucine lake, which is said to have arisen to the height of the

* Prope Fucinus est lacus, longitudine per Pelago, in Maris et vicinis maxime omnibus usus fuit. Memoria proditum est, illum nonnunquam usque ad montana crescere, interdum autem rursus decrescere, ut meris prius lacu loca desiccarentur et agricolarum rusticis exhiberent, qui subterranei humoris transiitione occulta quodam ratione spiritum efficiuntur. Deinde autem in agro fonte confluant aut omnino deficiunt aut rursus conflant.

STRABO, lib. v.

river Salto, and spreading through that valley, communicated with the Tyber. I confess that I cannot explain the passage in Tacitus, so as to make it refer to the Fucine lake, which, however, increased so continually,

Eodem anno continuè interitus actus Tiberis plana
 ubi stagnaret, relabens, fecit et adisciorum et homi-
 num strages. Igitur consuit Asina Gallus, ut libri Sybillini
 audirentur, renuit Tiberis, petiitque divina humanæque obte-
 gna, sed remedium coarctandi fluminis Argo Arpioni et
 Lucio Aratio mandatum.

TACIT. ANNAL. LIB. I. C. 76.

Actum deinde in Senatu ab Aratio et Argo, ut ob mo-
 demum Tiberis exundantes viderentur, flumen et Lacus
 per quos augebat. Auditiq; municipiorum et coloniarum
 legatos, orantibus florentibus, ne cunctis solito alveo demotus in
 ardua ardua transiret, idque ipsa periculum adferret.
 Cogitantis his intermaxillas differens, passum iterum secun-
 darios Italie campos, à annis nat, id enim parabatur, in
 sive deductas super stagnaret. Nec sentias debant, veli-
 nam lacum, qui in mare effunditur, obstrui recusantes,
 quippe in adjacentia interpretaris, optima res mortalium
 consuluisse naturam, que sua via fluminem, fove cursum, et
 que arigiam, ita sua dedit. Spectantes etiam religiones
 faciem, qui sacra et Lucos et Aras patris aratibus dicave-
 rint, quia ipsam Tiberim nolle proptus accola fluvio orbatam,
 minus g. erit sacre. Sed preces calceat, sed difficultas
 operum, Ave superstitis valuit, ut in sententiam Pisonis con-
 cederetur, qui nil mutandum censuerat.

TACIT. ANN. I. C. 79.

and

and rose so high, under the reign of Claudius, that he at length resolved at once to remedy the evil. As the tyrant did not possess the laudable desire of relieving his unhappy subjects, but was rather ambitious of procuring to himself immortal glory, accompanied by the expectation of reimbursement and advantage, he undertook to defray the whole charge of the work out of his private purse, provided the ground to be recovered from the lake was secured to him; and this he did, because others had offered to execute the plan upon the same terms. Probably the Mariti were glad to accept this proposal, and Claudius caused a canal, 3000 paces in length, to be partly cut, and partly hollowed out in the bowels of a mountain. Thirty thousand men were employed eleven years upon this stupendous work*; and

* *Facinus agrestis est, non minus compendii spe quam glorie, cum quidam privato sumptu emissuros se reputarent, & sibi siccatis agri concederentur. Per tris autem annos, nullis partim effosso monte, partim exciso, canalibus solvis ager, et post undecim annos; quousque circiter triginta hominum millibus sine intermissione operantibus.*

SUTTON. in Claud. cap. 30.

when it was compleated, the emperor celebrated its first application in a manner worthy of himself. The banks of the lake were so contrived as to produce the appearance of a Naumachia, and two fleets were equipped, and distinguished by the names of the Sicilian and the Rhodian, having on board 19,000 slaves, who were to exhibit a serious combat upon the lake. The emperor, in a splendid coat of mail, accompanied by his consort Agrippina in a chlamys of cloth and gold, was no sooner seated upon a throne, than the hopes of pardon made the death-devoted contenders salute him with the unanimous exclamation of "Ave Imperator; morituri te salutant;"—But the despot coldly answered, "Avete vos;" and when he saw that they delayed the commencement of the engagement, he furiously quitted his seat, and ran along the shore, threatening to destroy them by fire and sword, if the combat did not instantly begin. A silver triton now rising out of the centre of the lake, and giving the signal to engage, the two fleets valiantly attacked

attacked and fought; and the emperor granted the conquerors their lives". The canal was to have been opened immediately after the en-

* Quin et emissurus Fucinum lacum, naumachiam ante commisit. Sed cum proclamantibus naumachiaris, "Ave Imperator, morituri te salutant," respondisset, "Averte vos," neque post hanc vocem, quasi venia data, quisquam dimicare vellet, diu cunctatus, an omnes igni ferroque absumeret, tandem e sede sua profuissit, ac per ambitum lacus, non sine fœda vacillatione, discurrens, partim minando, partim adhortando, ad pugnam compulit. Hoc spectaculo classis Sicula et Rhodiæ concurrerunt, duodecimarum trisemum singula, exciente bucina Tritone argenteo, qui e medio lacu per machinam emergerat.

SUTTON. in Claud. cap. xi.

Subidem tempus inter lacum Fucinum amnemque Ilyris perrupto monte, quo magnificentis operis a pluribus viseretur, lacus in ipso navale prelium adornatur, ut quondam Augustus structo cis Tiberim stagno, sed levibus navigiis et minoris copia ediderat. Claudius triremes quadriremesque et undeviginti hominum millia armavit, cincto raribus ambite, ne vaga effugia forent; attamen spatium amplexus ad vim remigii et gubernantium artes, impetusque navium prelio solitos. In ratibus prætoriarum cohortium manipuli turmaque adstant, antepositis propugnaculis, ex quibus catapultæ, balistæque penderentur. Reliqua lacus classarii testis navibus obtinebant. Ripas et colles ac montium edita in modum theatri, multitudo innumera complevit, proximis e montibus et aliis urbes ex ipsa, visendi cupidinis, aut officio in principem. Ipse insigni paludamento, neque procul Agrippina phlauride vestita, præsedere. Pugnatum, quamquam inter

gement, but unforeseen difficulties arising, amongst which the principal was that the canal was not sufficiently deep, orders were given to remedy this defect; and when the canal was thought perfect, the emperor again repaired thither, and stained this useful work with another act of cruelty; for the lake was covered with a number of wooden platforms, upon which gladiators successively fought and perished. After this barbarous spectacle, a magnificent repast was given near the mouth of the canal, when the waters of the lake were to be let off in the presence of the emperor. But the measures for that purpose had been again so injudiciously taken, that the bridge of boats, convulsed, fortium virorum animo; ac post multum valetorem, co-aidiendi essent fuit.

TACIT. ANN. LIB. XII. C. 56.

I have neither literally nor wholly translated these authors, but hope to have clearly understood and explained them.

The following lines from Martial prove that Claudius caused the Fucine lake to be formed into a Nemi-lake, though but for a short time.

Fucinus et pigri mollioribus angus Nemi,

Hinc actus utam ferale Nemi-lacum.

MART. DE SPECTACUL. 22.

taining

raising the whole imperial court, was very nearly sunk by the impetuosity with which the water, after rushing into the canal with great violence, was repelled by there finding some obstacle to its progress. As soon as Agrippina had recovered from her fright, she seized the opportunity of complaining that Narcissus, to whom the whole management of the canal had been entrusted, had embezzled the money, and neglected the work; and indeed when the fury of the waters subsided, it was seen that the canal was still deficient in point of depth. But it does

* Sed perfecto spectaculo apertum aequor interat incerta operis manifesta fuit, haud satis depressi ad lacus ima vel unda. Eoque tempore interfectio, altius effossi specus, et contrahenda rursus multitudini, gladiatorum spectaculum editur, inditis pontibus pedestrem ad pugnam. Quin et convivium effluvio lacus appositum magnas formidine cunctos afficit, quia via aequorum percampens proxima traheret, convulsa ulterioribus, aut fragore et sonitu exterritis. Simul Agrippina trepidationis principis usq. ministrum operis narcissum incautos cupidinis ac praedatum. Nec ille reticet, impotentiam muliebrem nimiasque spes ejus arguens.

TACIT. *ibid.* c. 57.

does not appear that Claudius took any farther thought about it, or that the work was productive of any advantage, for, in Seneca's time, the lake again on all sides overflowed*. The undertaking of Claudius must however be always worthy of admiration. Pliny indeed reckons it amongst the greatest works which that emperor performed during his reign; and, with his wonted conciseness, tells us that the canal was partly arched, and partly cut through the rock†. He moreover expressly says, that his successor suffered the canal to go to decay, out of hatred

* Nihil tamen prohibet eodem loco aquam colligi et nasci quod in Fucino videmus inquem montis circumjecti fluvii derivantur. Sed et magna latentisque in ipso undæ sunt, itaque etiam cum hiberni defluxerint torrentes, scdam suam servant.

SENECA, *Quest. lib. iii. edit. Lips. 1741.*

† Ejsdem Claudii inter maxima memoranda equidem duxerim, quamvis delictum successoris odio, montem perfolium ad lacum Fucinum emittendum incensurabili profecto impendio, et operariorum multitudine per tot annos; cum aut corvatio aquarum qua terræ mons erat, egeretur in vertice montis, aut flix caderetur, omniaque intra in tenebris fierent, quæ neque concipi animo nisi ab illis qui viderent, neque humano sermone enarrari possunt.

PLIN. H. N. lib. xxxvi. c. 15.

to his predecessor; and this is confirmed by Dio in his 60th book, which indeed I have not examined in the original, but which is quoted by Cluverius, Muratori, and the authors of the universal history, in the twelfth part of their work; from whence it clearly appears, that the enterprize of Claudius had not succeeded. It is certain also, that no farther mention is made of the lake until the time of Trajan, when it appears that the deplorable situation was in some measure relieved by that incomparable prince; for there is an inscription in the church of Saint Bartholomew at Avezzano, returning him the thanks of the senate, and Roman people, for the lands recovered from the Fucinus*. It seems however that his en-

• Imp. Cæsari, Divi

Nervæ fil. Nervæ

Trajanæ optimæ

Aug. Germanicæ

Decisæ Ponticæ

POST. MAX. TRIB. POT. XIII.

CO. VI. PATRI PATRIS

SENATUS POPULUSQUE ROMANUS

OB RECOVERATIS AGROS ET POSSESS.

QUOS LAGO FUCINUS VICIENS.....

deavours

labours did not perfectly succeed; for, under his successor Hadrian, the lake was again attempted to be drained*. Thenceforward there is no mention of the Emissario, until the time of the Emperor Frederic the second; and it is indeed with the greatest pains, and after the most diligent enquiry, that I discovered any thing relative to the lake, and the surrounding towns, during that long interval of time. Thus much is known of Marruvium; that it was called Marfica in the time of Leo Ostiensis, of whom it was the native place. In the tenth part of Muratori's great work, is an account of an anonymous performance, called "*Tabula Chorographica Italiae medii ævi*," which describes this country as it appeared in the sixth century, and speaks of the lake Fucinus, and the cities of Alba and Marfica. We also learn from the "*Italia illustrata*," of Blondis Flavius Forlivienfis, that Pope Boniface the fourth was a native of Marfica; so that early in

* *Lacum Fucinum emitt.*

Æl. Spart. in vita Hadriani.

the seventh century, that town was still standing*, though it is in vain to examine history for the period of its destruction. The inscriptions found amongst the ruins at San Benedetto, and all the authors above referred to, sufficiently prove, however, that it was sometimes called Marruvium, and sometimes Valeria, but that in later times it was called Marfca. I cannot therefore agree with Ughello, that because there is no precise account of the destruction of that city, by the lake, the opinion is to be treated merely as a fable†. Blondus is the first who mentions the Claudian canal, after the time of Hadrian. That author lived in the 15th century, and in his rambles about

* Valeria civitas Boetiaci quarti pont. Rom. quo hunc Phocas Imperator Pantheon Romæ in omnium Christi Martyrum Basilicam petiit consecrari patria, æque civitate per Longobardorum tempora Marforum nomine in Valeria est conversum.

BLONDUS. FLAV. Forl. Ital. Illustr. Regis Ladis. edit. Brunus, 1503. fol.

† Quod fuisse aliquando Marfiam civitatem, quam hunc absorpsit, quæque Maris cognomen fecerit, plana fabula est.

Ughelli, Ital. Sacra, tom. i. col. 953.

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the

the neighbourhood, found two air-holes belonging to the Emissario, into which he threw stones that took as much time to reach the bottom, as he did to repeat two verses out of Virgil⁹. But this is all the information he gives us upon the subject. Alphonso of Arragon, surnamed the Magnificent, is said to have restored the canal, about the middle of the fifteenth century, a circumstance, which though unnoticed both by Giannone, and Bartolomeo Fazio, may perhaps be found in other authors

* Superius Tiflaccell, Porcelli et Cantalupa oppidula; deinde arduo in montis riven frigidas, quo superius, alii item celsiores superandi sunt montes Apennini jugis quantalibet altissimis comparandi. In quorum summitate putei, ut fertur plures, sed quos viderimus duo, exierat, tam alta parvis defossique ut dejectum bilibite saxum non prius reserat casus sui fontem, quam duo Virgiliani versu debita sunt pausa pronuntiatiq; quos quidam perforatis saccisq; et excavatis in imo montibus sive a Martio Edile sive a Claudio imperatore perducendis Romam a lacu Fucino aquis, ne conclusis per cunsum aquas moraretur, spiracula fuerant adhibita. Suetonius namquam tranquillus Claudium principem dicit triginta milia servos undecim annis emittendo lacu Fucino; et aquas Romam perducenda tenuisse supra rivum frigidum recta est Arceclum secus quod Planities incipit.

BLOND. FLAV. *Ibid.*

who

who have given the history of his life. Nor was it possible for me to find either in Giannone, or in Francesco Milizia's excellent account of ancient and modern architects*, a confirmation of the assertion that the chevalier Fontana, and Maria della Cava, had undertaken to repair the canal, at the commencement of the seventeenth century; but in fact it is of little consequence whether King Alphonso, or the Spanish Viceroy, did any thing towards its restoration.

I think I have now sufficiently proved from history, that the lake did a great deal of damage, and that the Emissario was made to prevent the continuance of it. But as many persons, for what reasons I know not, obstinately insist that the canal is an useless work, to be attributed to nothing but the idle vanity of Claudius, and that the hidden channels in the bay of La Pedogna, are sufficient to keep the lake within its proper bounds; and as others

* *Memorie degli architetti antichi e moderni. Terza edizione. Accresciuta e corretta, da Francesco Milizia.*

PARMA, 1781, 2 vol. 8vo.

believe, that the celebrated *Aqua Marcia*, are drawn from this lake, I will endeavour to prove the falsity of such opinions, before I proceed to the farther history and description of the present state of the marsh. They who think that there is a sufficient outlet in the bay of *La Pedogna*, where a temple was consecrated to the goddess *Pitonia*, endeavour to prove this assertion by references to *Strabo*, *Pliny*, *Tacitus*, *Frontinus*, *Vibius Sequester*, and *Lycophron*. All that *Strabo* says upon the subject, has already been mentioned in note, page 337; but no notice is there taken of *Pitonia*, although he speaks of certain subterraneous discharges. *Pliny*, who in his natural history, has assembled so many trivial remarks, tells a notorious untruth, in saying, that a river runs through the *Fucine lake*, in the same manner as the *Adda* runs through the lake of *Como*, and the *Ticino*, through the *Lago Maggiore**. But an inspec-

* *Quandam vero et dulces inter se supermeant alias. Ut in Fucino lacu inuestus amnis, in latio Addua, in Verbaso Ticina.*

PLIN. H. N. lib. ii. c. 103.

tion of the premises will easily prove the falsity of the assertion. Not a word relative to it is to be found either in Tacitus or Fronto; Lycophron I have not been able to consult; and Vibius Sequester seems to have copied Pliny; for he says that the river Fionius flows through the lake in such a manner as not even to mingle its waters with those of the Fucinus*. Blondus also appears to think that the lake discharges its superfluous waters by means of subterraneous channels, and cites Pliny as his authority, who is said to have somewhere written that the Fucinus has subterraneous passages by which the waters run off, and form a river†.

* Fionius flumen, qui per medium lacum Fucinum mare
foram ita decurrit, ut aqua ejus non miscetur stagno.

VIBIUS SEQUESTER, de Fontibus et Fluvii.

† Scribit Plinius Fucinum lacum, quem marforum appellat,
subterraneos habere conculos, quibus aqua cuncto effluens tem-
pore ammitti faciat. Et sive plinii textus, ut saepe alibi, eo
in loco corruptus, sive vitiosus et mutilatus est, non satis
poterimus intelligere, quo in loco fluvium ille coisit affirmet.
Sed fontem esse scimus Anagnin topbanum, nec qui hinc
quando Fucinus glacie astringitur secus vero postmodum,
austo aut autumnis ingentem emovet vim aquarum, quae hinc
amnem a facto vito oriundum, adaugent.

BLOND. FLAV. Forl. loc. cit.

I know

I show not whether he refers to the extract quoted in note, page 350. or to any other passage, that I never could discover; or whether (as he himself apprehends) his copy was altered in that place; but it is equally untrue, that the spring at Amagni has the smallest communication with the lake Fucinus; that its being dry in winter, is owing to the freezing of the lake; that in summer and autumn, it partakes of its increase, and pours forth copious streams of water into the Liris. High mountains, and deep vallies, separate the lake from the spring, and I even doubt whether its waters could discharge themselves into the Liris. After an examination of the premises, I can in some measure contribute to the explanation of the doubts as to subterraneous passages, by declaring that in the neighbourhood of La Pedogna some water does actually pass through hidden channels, as I shall afterwards more clearly shew. Abbé Lolli has also assured me, that in the valley, where rises the Fibrenus, is a considerable grotto, with a lake, which is furnished with

with water by unknown sources, and is so situated, that it may very well receive its supplies from the Fucinus. But it is so inconsiderable, as scarcely to contain the tenth part of the waters that pour into the Fucine lake, and is consequently unable to prevent its overflowings. The opinion that the *Aquæ Martiæ* were conducted from the Fucine lake, is equally unfounded; and, in order to make this assertion clear and comprehensible to my readers, I shall add the entire description of that aqueduct by Frontinus*, from which it will manifestly appear,

* *Concipitur Martia via Valeria ad Miliarium XXXIII. divericulo cantibus ab urbe Romæ dextrorsus miliarum passuum III. villa subiacenti atque sub Nerone Principe primus frons ad miliarium XXXVIII. sinistrorsus lateri spaciis passuum CC. suis substructionibus, pons statim stagnans totum prævisidi. Ductus ejus habet longitudinem a capite ad urbem passuum LX. miliarum DCCX. et semis, rivo subterraneo passuum LIV. miliarum CCLXVII. et semis, opere super terram VII. miliarum CCCXIII. Et longius ab urbe pluribus locis, privatis et publicis, et D. vallis opere arcuato passuum CCCCLXIII. propius urbem a VII. miliaris substructione passuum CLXXXVIII. reliquo opere arcuato passuum VI. miliarum CCCCLXX. Idem Augustus in supplementum Martiæ, quotiens fecitates agerent auxilio, pliam et*

even to such as are but little acquainted with the nature of the country, that the *Aque Martie* have no kind of connection with the *Fucine lake*; and that, according to the measurements and distances, laid down by that author, they must rise not far from *Subiaco* Cluverius, who in general is so learned and well grounded, is here exceedingly confused; and it is evident

quam ejusdem bonitatis opere subterraneo perduxit usque ad Martiam Rivum, quæ ab inventore appellatur Augusta.

SARTI JULII: *FORNARI de Aqueductibus Illustr.*

Keucheri Amstel. 1661, 8vo.

• Sergio Salpicio Galba et Lucio Aurelio cotta Coss. a Senatus negotium datum est Q. Martio Regi Pontori, veteris dorum aqueductum. Et quoniam incrementum urbis exigere videbatur amplioribus in modum aquæ, videtur mandatum est, ut cerneret, quænam alia aqua posset, in urbem perducere et ampliores ductus faceret. Non solum autem hic Martius antiqua aqueductum reparavit; sed etiam novam aquam a nomine suo Martiam appellatam, a Fucino fonte per Nerfones Fucinum Lacum transiens intra paucos dies tempus perduxit. VITRUS SEQUESTER, *LYCOSMACHUS, TACITUS, ANTON. LIB. XIV. PAVANUS, STRABO, LIB. V.* Qui tradunt Picentiam Rivum cum Fucino lacu transiisse, non a lacu specus mergi, adeoque hanc aquam Martiam sub terram se condere in obscuram profunditatem cuniculis et in Tiburtino rursus speculi. ANDREAS BOCCACCIO *VIRORE HISTORIA,*

that be never visited, or at least very superficially examined, the country, and only copied the ancient authors, who throw little or no light upon the subject. Strabo only says, that it appeared in writing that the *Aquæ Martiæ* came from the Fucine lake*. Pliny places their

lib. 5. transit; projectæ farsfaræas glebas et alia signacula is subscubentem meatum, ubi hic locus subsidet, reddi in scatebram quondam subiacentis lacus, et hic locus est de quo Plinius ait, in Tiburtino se aperire Marciam aquam. Hujus Aquæ Martiæ ductus teste Ferruccio—(v. note, page 358)—Visitur hodieque ingentes hujus aqueductus reliquæ, ab ipso lacu, qui mille passus est super oppidum subleuantem, incipientis decurrentisque ad oppidum Anienis adpositum, cui vulgare vocabulum victoræ, xlv millia passuum a Roma distans; partim cuniculis, ut inquit Plinius, per saxos montes ædificatis partim maris, fornacibusque in sublimis erectis. De hac aquâ castæ Scævini Silvani, lib. 1. c. 23. iii. et v. sed Marfæ nives et frigore, ut hic poëta canit, hæc aqua Marcia a fonte suo ferebat Plinio, qui in Apennino monte confinio Marforum Pelignorumque circa oppidum St. Sebastiani, hæc ita procul gelidissimis fontibus supra dicti æmilia, qui Silvianorum Pelignorum oppidum, abluit exorta, apud oppidum, qui vulgare vocabulum venæ, in Fucinum lacum transit.

CLUVER. Ital. Antiq. lib. ii. c. 15.

* Cæsar de Fucino lacu Martiæ aquæ fontes emensque scriptis mandatum est, quæ rigationes Romæ propinque, quæque reliquæ super aqua præbentur.

STRABO, lib. v.

source in the farthest mountains of the Peligni, and says that the waters flow through the Fucinus, under mountains, and through vallies, and only emerge to view at Tibur*. Blondus is also of opinion that the *Aque Martie* were indebted to the Fucinus for their supply; but

* *Clarissima aquarum omnium in toto orbe, frigoris salubritatisque palma præcorio urbis, Martia est, inter reliqua decem munera urbi tributa. Vocabatur hæc quondam austia; seu ætatem ipsæ Fluvialis. Oritur in ultimis montibus Pelignorum; transit Maros et Fucinum lacum, Romam non dubie petens. Mox specus æversa, in tuburina se aperit, ex quo per fornicibus structis perducitur.*

Plin. H. N. lib. xxxi. c. 3.

Sed dicaster, vera inscriptione lavisti miracula, quæ Q. Martius Rex fecit. Is iussu Senatus, aquarum Appiæ, Anienis, Tepulæ ductus reficere, novam à nomine suo appellatam, cuniculis per montes actis, intra præteritum seu Tempus adduxit.

Plin. L. xxxvi. c. 15.

† Ex eoque lacu (Fucino) ductos fuisse fontes *Aque Martie*, quæ potaretur Roma. Nosque in Roma instauratis ostendibus Martium in sua utilitate introduxisse aquam ejus nomine appellatam, quæ quidem aqua super omnes alias introductas probabatur. Et Plinius dicit, Juvenem annem superantem Fucinam, qui Juvencus Romam a Manio sit perductus.

BLOND. FLAV. LOC. cit.

If we compare the above passage, and that quoted from Claverius, with the extracts from the ancient authors, we shall find

all that he says, proves only that he read the ancients, and did not examine the premises himself. In short, I think that from what has been said, it will be allowed that those waters manifestly flow not from the lake, which consequently does not find a sufficient discharge by

find that the moderns have only copied from the ancients, without having any idea of the geographical situation of the lake, or the nature of the country. My chart, made upon the spot by an excellent engineer, will shew that most of the places are falsely marked, and rivers made to flow in and out where no rivers ever were, in the chart published by Cluverius in his *Italia Antiqua*; and if we examine the map of ancient Italy, by Abraham Ortelius, we shall be still better enabled to judge what reliance ought to be placed upon the accounts of those authors. As a proof also that the commentators upon the ancients are as little to be relied upon, I shall insert the following passage, taken from that archærologist Joseph Scaliger's "*Animadversion ad Chronicon Eusebii*, p. 192. Edit. Janssonii 1658."

De Fucino lœu siccando verum est tentatum quidem a Claudio, sed frustra. Dio citatur Græce, ac Suetonius perfecisse scribit, quod miror, nunquam enim emissus fuit, et Seneca quæstiones suas, scribente, lacus ille erat in rerum natura. Spartianus vero ait, ab Hadriano emissum. Tentavit autem lacum Fucinum emittere Claudius, se secundo et Carina Cons. Anno secundo Imperii sui. Sed nemo scit, quo nomine hodie vocetur, quod si emissus est, ab Hadriano frustra queritur.

means of the Pitonius, and the Aqua Martia. But though it is said that it would be needless to attempt any other outlet, and ridiculous to be at any farther expence about it, I trust that the result of the following statement will justify my difference in opinion.

Allowing that the Chevalier Fontana actually restored the Emissario; it is now more than 170 years since any attention was bestowed upon that noble work. Whether that great architect contrived to repair it so as to make it answer its purpose only during a certain period, or whether the inhabitants of the lake, discouraged by so many useless attempts, determined patiently to witness the inundation of their property, I am not able to decide; but it is certain, that since the middle of our century the inroads of the lake have been more considerable, and the inhabitants of its banks have not only patiently submitted to them, but have apparently forgotten the very existence of a canal, and the possibility of any other method of relief. But it was reserved for the patriotic, and indefatiga-

ble Abbé Lolli, to give some assistance to his country. After tracing out the course, and penetrating into the *Emissario*, which he examined in every part, so as fully to comprehend the whole extent of its utility, he made accurate drawings of it, and hastened to Naples in the year 1786, with the sweet hope of being able to deliver, not only his native Avezzano, but all the other towns upon the lake, from their calamities. His memorial set forth the pitiable situation of that portion of his Neapolitan Majesty's subjects, whose property was daily invaded by the all devouring lake, without being able to prevent its progress, and whose habitations would shortly be rendered insecure. At the same time he gave a description of the canal; and referring to the delineations thereto annexed, he clearly demonstrated the facility of cleansing, and restoring it, and of thereby bestowing happiness upon the country. As it is not usual at Naples to give early answers to petitions, Lolli applied to his Britannic Majesty's envoy, Sir William Hamilton,

well known throughout the kingdom as the protector and reverer of antiquities, and after shewing him his plan, intreated his protection and good offices at court. That gentleman immediately determined to visit the premises, and soon afterwards travelled as far as the Fucine lake, which he narrowly inspected, and found the Abbé's views so important, and his plans so useful and practicable, that, upon his return to court, he strongly recommended him, and his petition, to the king. The real Udi-ença at Aquila being thereupon required to take the Abbé's proposal into consideration, they sent the Uditore, Don Marino da Franchi, to examine the premises, who in his report confirmed all the representations of the Abbé, and greatly commended the remedies he had proposed. Upon this his Majesty not only exonerated the towns of Avezzano and Antuchi from certain taxes, on account of the damage they had incurred from the lake, but ordered two engineers to repair thither, and diligently enquire into, and report the nature and uses of the canal, and

and the Inconveniences arising from the lake, with the best method of obviating them. For reasons to me unknown, the journey was performed by only one of the engineers, a certain Carletta, whose name appears to a variety of miserable performances. This man, who before he quitted Naples, was thoroughly persuaded of the nullity of the Abbé's complaints, facts, and resources, passed ten days at Avezzano, without visiting either the lake, or the canal, and made a report quite contrary to the wishes of the inhabitants, and their advocate. I should deservedly forfeit the esteem of the public, if I communicated to them the whole of his memorial, replete with notorious untruths, false positions and bombastic descriptions; but I cannot help quoting a part of it, in order to convince the reader of his ignorance and disregard to the truth. He declares that a subterraneous fire still exists in the neighbourhood of La Pedogna, and has there made cavities which carry off a sufficient quantity of water, and that it is only necessary to make small channels,
for

for conveying the water to a gravelly soil, where it would quickly be absorbed. He says that the lake has swallowed up neither fields nor vineyards, and only occupies its original and native bed; and that if an outlet were made, it would not only do irreparable mischief to the fishery, but subject the whole country to noxious vapours. He farther adds, that the Emissario was worthy of the stupid imagination of Claudius, and that the money employed in restoring it, would be wholly thrown away. Who would believe that notwithstanding the protestations, documents, and admeasurements, contained in Lolli's answer, and notwithstanding the assurances given by intelligent travellers, who had visited the premises, the Abbé's proposal should be rejected? Thus are a beneficent sovereign, and an able minister, deceived by the dark practices of intrigue! But like a good patriot who never loses sight of his object, the worthy ecclesiastic persevered until, in a favourable moment, another engineer was appointed, by whom and his assistant,

assistent, the following remarks were made, chiefly in my presence, and partly after my departure, with such exactitude, vigilance, and impartiality, as convinced me that their character for unblemished probity, was well founded.

All the mountains around the lake are of a calcareous nature, and full of grottes and cavities, many of which I examined and found full of beautiful stalactites; but I could not discover the most feeble traces of a volcano in any part of the neighbourhood. I think I have already proved from history that the lake has done infinite damage to the inhabitants. The most authentic documents attest, that it has covered the whole plain before the village of Luco, an extremely fertile tract between Luco and Trasacco, and a great part of the country below the last mentioned place; the water is now 14 feet deep, where the road not long since led from one of these villages to the other; and the fate of Antuchio is well known to every

one

one here. But even if all these circumstances were not sufficiently attested, the augmentation of the lake might easily be proved by examining its skirts; for, about half a mile from the shore, the remains of the poplar trees, with which the inhabitants are accustomed to surround their fields, are still to be seen in the water; and where the eye can discern the bottom of the lake, the stems of the vines are clearly to be distinguished. Whole beds of fresh water muscle-shells, which are found in the valley of Cesolina some miles from the lake, confirm Strabo's report of its frequently stretching as far as the mountains. The present surface of the lake contains 47 Neapolitan square miles; its circumference amounts to 35 miles; in the deepest part it measures 60 palms, but at the distance of the third part of a mile from the shore, it is not more than 30 palms deep. Don Ignazio Stilo, the engineer, has calculated, that seven square miles of excellent land, worth 300,000 ducats, (£56,250.) might be recovered from the lake, by

by letting off water to the depth of thirty palms.

The necessity of making a vent for the waters of the lake having been sufficiently ascertained, the next question was, how to make it in the easiest and most serviceable manner; and three public proposals demanded examination. That made by Don Luigi Targioni, and communicated in writing to the royal society of Georgofili at Florence, consisted in carrying off the super-abundant waters by an open canal, either across the Palentine fields into the Liris, or through the valley of Cersolina into the Salto. Although this plan appears practicable upon paper, its execution would be perfectly impossible; for each of the proposed canals must not only be ten miles long, but at the distance of two miles, the ground rises 182 palms, and as much at the distance of two miles farther. The next proposition, made by Don Domenico Jatofti (a gentleman of Avezzano, and governor there for the family of Colonna),

and

and approved by Carletta the engineer, had for its object the application of the natural channels of La Pedogna. To this end five canals were there made by Don Domenico, at a great expence, for conveying the water from the lake to the hidden channels. The first time we visited them, no discharge of water was perceptible; but upon a second examination by the engineers, after being cleansed and deepened, the discharge was clearly seen. In order precisely to determine how much water could be thus carried off, the following experiments were made by Don Ignazio, in the presence of the superior of the university of Avellan, by whom they were certified under hand and seal.

Two balls of wax were fastened to a string and a very thin rod; the one ball being of the specific gravity of the water, and the other somewhat lighter. This was for the purpose of comparing the celerity of the current upon the surface, and near the bottom. The comparison was subject to the Newtonian regulations,

tions, and the following measures were taken before and during the experiments. An extent of forty palms, from the entrance of the waters of the lake into each canal, being measured and marked out, the ball was put and kept in the strongest part of the current, whose motion was observed by a stop-watch; and the experiments were repeatedly made with different sorts of swimming bodies.

In the first canal, which was five palms, eight inches wide, and four palms, nine inches deep, the ball traversed a space of forty palms in thirty-three seconds of time.

In the second canal, which was four palms, four inches wide, and four palms, three inches deep, the ball employed fifty-six seconds.

In the third, which was four palms, three inches wide, and five palms, six inches deep, it took up fifty-five seconds.

In the fourth canal it occupied seventy seconds upon a width of seven palms, two inches, and an half, and a depth of two palms, nine inches; and in the fifth it took up an hundred
seconds

seconds upon a width of seven palms, and a depth of two palms, five inches.

If then we calculate, with Newton, that the rapidity of the water in the current, compared with that near the shore, was as 22 to 11, we shall find that there flowed during the above-mentioned periods of time

Through the first canal	651 $\frac{1}{2}$
Through the second canal	454 $\frac{3}{4}$
Through the third canal	571 $\frac{1}{2}$
Through the fourth canal	484 $\frac{1}{2}$
And through the fifth canal	412 $\frac{1}{2}$

and that in twenty-four hours the five canals carried off 4,264,800 palms of water. This indeed only happens when they are perfectly clean, and capable of their greatest effect; but when the lake is ruffled, and the east wind blows, that effect in a great measure ceases; and the superior of the university has since declared that the present discharge is scarcely perceptible. Moreover all the above quantity of water is not effectually drawn off from the lake;

lake; for the gravelly nature of the banks suffers not a little water to penetrate through them into the lake. But even supposing that the lake loses that quantity in the above-mentioned space of time, what proportion does it bear to the quantity it receives in the same space? After an accurate examination of all the great and small streams and springs which empty themselves into the lake; after bringing to account the rain that falls upon a surface of forty-seven square miles, into which pour also the partial contributions of the surrounding mountains; and after reckoning the hidden sources that mix their waters with the lake, and of which there is known to be a copious one near Avezzano, and another near Antuschio (called Capo di Aqua, which is the outlet of the lake of Scanno, amongst the mountains), we may venture truly to assert that the lake receives sixty times more water than is carried off by the five canals. It is no wonder therefore, that since those canals were made, the lake should have continued to extend itself, as

is proved by marks at that time made, and that it should even have gained ground during our residence in its neighbourhood; neither is it a matter of surprise that after continued rains, or a heavy fall of snow, and the accidental stoppage of La Pedogua, it should sometimes stretch even as far as the mountains themselves. In order to keep the lake within proper bounds, by means of such canals, they must be multiplied until they carry off the necessary quantity of water. But without objecting that they might be entirely obstructed by various accidents, the expence of making them would be too great; for they could not be made parallel with the shore, but must run in a direct line from the lake, where the ground rises considerably, and soon becomes rocky. The construction of the five existing canals, each of which is 100 palms long, cost 1000 ducats—(£262. 10s.)—and no less than 3000 ducats—(£787. 10s.)—have been expended in the course of only four years, in cleansing and repairing them. According to the

the

the proportion of water carried off by those canals, it would require 500 to balance the quantity poured into the lake; but besides that, there is neither room for that quantity, nor the certainty that each canal would find a hidden channel; the charges would amount to a most enormous sum of money.

It now remained to consider the third proposition, which had for its object the restoration of the Claudian Emissario; and we repaired to its mouth, or outlet into the Liris, below the village of Campistrello. That part of it, which on account of the slope of the mountain, had been constructed, either wholly or in part, of masonry, is long since fallen in; but several fragments of it are still visible; and the uncovered part measures forty-eight palms to the spot where it is entirely hewn out of the rock. Upon the sides of this uncovered part are several marks in the rock, which doubtless point out the repeated attempts to deepen the canal. The present mouth of the Emissario is nine palms wide, and seventeen and a quarter

high: Thirty palms from the entrance, the canal makes an angle, and much water drops from the top of the arched rock. The canal was here 10½ palms wide; and in general we observed that there was an occasional difference of some palms in the width. Beyond the angle we found a great deal of dirt, which increased as we advanced upon boards placed upon it for that purpose; and after we had penetrated 480 palms, we could touch the top of the arch, whose chord there measured six palms. We saw a number of stalactites, and observed that large pieces of the sides and top of the rock were bricked up, probably on account of the cavities so frequent in the limestone. A large stone that appeared to have fallen down through a perpendicular well or shaft, and was surrounded by other stones, and a quantity of sand, like that upon the Palentine Fields, prevented our further subterraneous journey. We therefore turned back, and having ordered an extent of 176 palms from the mouth of the canal to be well cleansed, we took a proper
level,

Lake

- A. Mouth of the Emissario, towards Campitello.*
- B. Mouth of the Emissario, towards the Lake.*
- C. Summit of Mons Sabianees.*

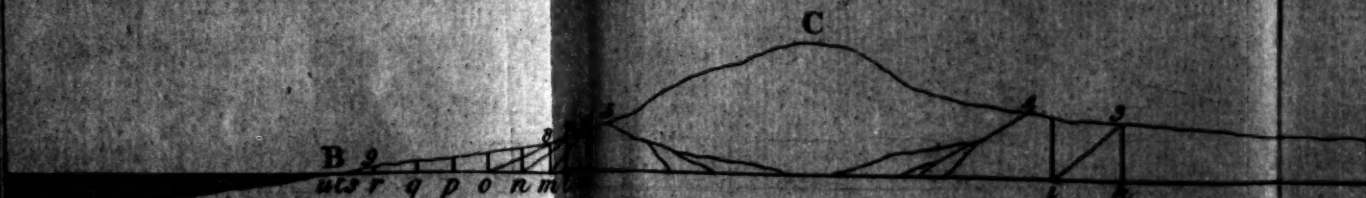


Fig. 1



Fig. 2



level; and found that the fall in that distance amounted to one palm, ten inches, and four minutes; so that reckoning seven palms to a pace, and a thousand paces to a mile, the fall of the canal is $75\frac{1}{2}$ palms in a mile. As we knew that air-holes and shafts, marking the course of the canal, still existed upon the Palentine Fields, we visited them successively; and the engineer afterwards took their exact distances, depth, and size, and communicated them to me. See Plate V.

From the mouth of the canal to the first vestige of a hole (*a*) are 780 palms; from *a*. to *b*. are 480 palms; here the Emissario forms an angle of twenty degrees. From *b*. to *c*. are 8000 palms; from *c*. to *d*. 565 palms; from *d*. to *e*. 1230 palms; and from *e*. to *f*. 2800 palms. These were only vestiges of shafts; but *f*. is an entire perpendicular square shaft, or well—here called Pozzo—ninety palms deep. When we first examined it, it had twelve palms depth of water, whose surface was ninety-seven palms above the level of the lake; but when the

B b 3

engineer,

engineer revisited it, after heavy rains, he found it quite full of water. Very near this perpendicular shaft, is the aperture of an oblique collateral gallery, here called Conicula, whose direction is the same as that of the perpendicular shaft, and only inclining enough for the purpose of a convenient passage. At its entrance are the remains of masonry, which probably secured it from rain; but a stalactite column having nearly filled it up, we could not penetrate far into this gallery, which is directed towards the Salviano. From *f.* to *g.* are 620 palms: this shaft is quite visible, and its depth is eighty-four palms, so that its bottom is ninety-six palms above the level of the lake. It was dry when we first saw it, but the rain afterwards filled it with water. This shaft has also a gallery for its neighbour. Not far beyond it, the Emissario again alters its course, which is thenceforward continued directly towards the lake. The elevation makes an angle of sixteen degrees. From *g.* to *h.* are 5042 palms. This shaft was so deep that we could

not

not measure it; but by throwing down stones we perceived there was water at the bottom. Its depth is here computed at 400 palms. Not far from it is a gallery. From *h.* to *i.* are 544 palms. This is the last perpendicular shaft upon the western side of the Salviano, and measures twenty feet square; but we could not determine its depth, which is here computed at 480 palms. Not far beyond it the mountain is cut away; and probably the main gallery, communicating with the canal through the Salviano, was formed here; but very few traces of it are now to be seen. From *i.* to the perpendicular line that may be drawn from the top of the mountain *C.* to the Emisfario, are 1844 palms; and that line contains 1012 palms, from the summit of the mountain to the surface of the canal. From that line to the first gallery upon the eastern side of the mountain are 1600 palms. This gallery, which is open, has an extremely lofty entrance, furnished with a sky-light, and had also an arched penthouse, the remains whereof are still to be

discerned. In the gallery two persons can with difficulty pass each other; and at the sides are small gutters for carrying off the water, which drips copiously from the rock, and has formed some stalactites that nearly obstruct the passage. There are also small and large niches, at certain distances, in the rock; the large ones being destined for repose, and the small ones for lamps. This gallery divides in two places, and at each division forms two arms; probably for the purpose of increasing the circulation of air, and promoting the easy removal of the materials. After penetrating several hundred palms therein, we were forced out by the waters that filled up the remaining part. This gallery is 142 palms distant from the first great shaft on the same side of the mountain. This pozzo is 184 palms deep; so that its present bottom is nineteen palms below the surface of the lake. It contained twenty palms depth of water. We visited the gallery not far distant from this shaft, and advanced 172 palms, when we were stopped by the water, which

which the rain had lately increased, but which stood seven palms below the surface of the lake. In this conculo we had an opportunity of observing the method of proceeding when a gallery broke in upon a pozzo; for the gallery was carried round the shaft, and its direction continued upon the opposite side, leaving between them a thin wall of rock, with apertures for the admission and free circulation of air.

The shafts now become less distant from each other; from *k.* to *l.* are 152 palms, and it and its gallery are filled up. From *l.* to *m.* are 205 palms; this is 98 palms deep; its bottom is five palms, $6\frac{1}{2}$ inches above the level of the lake, and it is quite dry; but there is water in the neighbouring gallery. From *m.* to *n.* are 267 $\frac{1}{2}$ palms; this shaft is 96 $\frac{1}{2}$ palms deep, and 13 palms, $5\frac{1}{2}$ inches below the level of the lake; it contained eleven palms of water. From *n.* to *o.* are 267 $\frac{1}{2}$ palms; this shaft is 96 palms deep, 32 palms, 4 inches below the level of the lake, and contained 15 palms, 3 inches

3 inches of water. From *c.* to *f.* are $26\frac{7}{8}$ palms; this pozzo is 85 palms, 2 inches deep, 32 palms, $7\frac{1}{2}$ inches below the level of the lake, and contained $26\frac{1}{2}$ palms of water. From *f.* to *g.* are $283\frac{1}{2}$ palms; it is 55 palms deep, 24 palms, 7 inches below the level of the lake, and contained 13 palms of water. This shaft was the nearest to the lake, that we could clearly see; but as a wall between the lake and *g.* made us suspect that there was another shaft, we examined it, and actually found another pozzo; *r.*, $302\frac{1}{2}$ palms distant from *g.* It was cleansed out to the depth of $14\frac{1}{2}$ palms, when the workmen came to water, which was 11 palms, 5 inches below the surface of the lake, and remained so during fourteen days. From *r.* to *B.* or the lake, are 170 palms. As we were now desirous of ascertaining if there were any traces of shafts at the bottom of the lake, we caused a lofty pole to be erected upon the shore, in a line with the Emisario. To this pole was affixed a hemicycle, through which could be seen the boat that sought the shafts.

in

in the direction of the canal. Thus from *B.* to *1.* were 70 palms, where was a shaft filled up with materials. The depth of the lake was three palms. From *1.* to *2.* were 112 palms, and the depth of the lake was $4\frac{1}{2}$ palms; and from *2.* to *3.* were 126 palms, where the depth of the lake was five palms and an half. No farther traces of shafts were discoverable; for the lake became deeper at every step, and 371 palms beyond *3.* and in the same direction, was a depth of $8\frac{1}{2}$ palms; 455 palms farther, it was $12\frac{1}{2}$ palms deep, and 966 palms farther, it was 17 palms deep. The mouth of the Emissario is universally supposed to have been at that spot; but the lake was too deep to admit of a discovery. After all the measurements were made, it was found that the vent of the Emissario below Campistrello was $164\frac{1}{2}$ palms, and the Liris $214\frac{1}{2}$ palms, below the level of the lake.

Such was the state of the celebrated Claudian Emissario, a work so worthy of the Romans, that no one will enquire whether we were

were astonished at its grandeur and extent; Every lover of ancient literature will be glad to find the accounts of Suetonius, Tacitus, and Pliny, so fully confirmed; for the present state of the canal very sufficiently proves the truth of what they have reported relative to its construction. When we reflect upon the length of this Emissario, amounting to three Italian miles; when we consider its subterraneous dimensions, and especially in that part where it is carried through the solid rock; and when we think of the numerous perpendicular shafts and oblique galleries (with scarcely the half whereof we probably are acquainted), and of the astonishing depth of the one, and the length of the others, it will no longer be deemed fabulous that 30,000 men should have laboured at it during eleven years. But it will ever be matter of surprise, that with so few mechanical acquisitions, and such little mathematical knowledge, they should have been able so precisely to determine its subterraneous direction*.

* This very canal seems however to prove a greater degree of perfection in mechanics and mathematics than the
moderna

We were now most thoroughly persuaded that this work is not sufficiently striking in its exterior, to have been constructed out of a ridiculous sort of vanity; and an inscription, still existing at Avezzano, convinced us that it was destined for the service of the inhabitants; so that it is difficult to determine why it should not again be made serviceable, and why other measures should be adopted for carrying off the waters, when the most advantageous method presents itself. But as some remonstrances made by intelligent and impartial persons against the restoration of the canal, have contributed towards deciding the government against it, I will endeavour to refute them, in hopes of doing away all the objections that may be made to the execution of that most useful project.

First. They say that the mouth of the Etna-moderns are in general apt to allow; and I think this opinion may without difficulty be supported by referring to many noble monuments of Roman skill now extant in the capital, and various other parts of Italy. A.

fario,

fario below Campistrello, is too high to carry off the water, and has too little fall.

I answer, that this is fully contradicted by our measurements; for as the vent of the Emisfario is $164\frac{1}{2}$ palms below the level of the lake, which in its deepest part measures only 60 palms, there remains—after deducting three palms for the rotundity of the earth—a fall of $101\frac{1}{2}$ palms; which is sufficient to evacuate the whole contents of the lake.

Secondly. They pretend that as the Romans never obtained the purpose intended by this undertaking, it must have been somewhere essentially defective.

I reply, that the ancient authors plainly tell us, that upon the first essay in the presence of Claudius, the canal had not a sufficient fall, and that upon the second trial, the failure was principally owing to not letting the water off by degrees. But hydraulics are now too well understood, not to ensure success. Neither is it absolutely certain that the lake was not drained under Hadrian; and the silence of the authors

authors who wrote under his successors, may serve as a proof that the Marfi had no longer any reason to complain. But no one can be surprised that in the succeeding times of confusion and disquiet, this noble work should perish, like many others.

Thirdly. They alledge, that as the water in the shafts and galleries probably arises from the lake, it would be impossible to cleanse the canal, without endangering the lives of the workmen.

To this I answer, that the difference in the quantity of water at various periods, and in different shafts, and especially the depth of water in the shaft nearest to the lake, sufficiently prove that it is only rain water, and that it cannot have the smallest communication with the lake. This water can also be easily drawn off, or gradually conveyed away.

Fourthly. It is said that during such a long period of disuse, the canal must be so dilapidated, that its restoration would cost a most prodigious sum.

But

But in reply to this objection I assert, that such parts of the Emisario as we examined, were in the best condition; except the outer works, which might easily be repaired; a few shallows have indeed been formed; but even when a shaft and a gallery meet, and are divided only by a thin partition, as has been before observed, we found the division perfect and entire.

They who object to the restoration of the lake must likewise confess, that, about twenty years since, more than thirty persons, of veracity, penetrated through the main gallery on the east side on Monte Salviano, into the canal, and after wandering about without finding any obstacle, came out along a gallery upon the west side of the mountain.

Don Giambattista Aloisio, a gentleman of Avezzano, eighty-two years of age, and of unimpeached veracity, asserts, that about forty years since, he and six other persons passed through the above-mentioned gallery into the canal, in which they walked as far as the shaft
nearest

nearest to Campistrello, and consequently traversed the greatest part of the Emissario; but that their farther progress was impeded by an heap of rubbish thrown down the shaft, by the proprietor of the ground above, in order to prevent his cattle from falling into it. He declares that the Emissario was then in the best condition; but that it had been supported by brickwork in several places, as we had likewise observed in our visit to its entrance.

I trust it will now appear evident, that the restoration of this useful work would be neither difficult nor expensive.

The best method would be to cleanse the canal from the vent at Campistrello to the first pozzo, which should then be thoroughly emptied and cleaned, surrounded with a wall, and covered. In this manner the workmen might proceed without danger, until they had restored the shaft, nearest to the lake, from whence a channel, of no great depth at first, should be dug as far as the shaft, and as much water gradually let off as would leave the first shaft in the lake

perfectly dry. After repairing that part of the canal, another channel should in like manner be dug, and the same method pursued until a sufficient quantity of water should be drawn off, or until the workmen came to the entrance first made by the Romans. A sluice should there be put up, as well for the purpose of letting off a certain quantity of water, as for totally preventing its passage; for great care must be taken to guard against the sudden increase of water, and the stoppages that might otherwise be occasioned by the violence with which the east wind drives the waters of the lake towards the Emislaro. The entire restoration of this useful work is computed, by Don Ignazio Stilo, at about 150,000 ducats—(£28,125.)—a sum which would be doubly repaid by the acquisition of excellent land, without reckoning the prevention of all future damage.

As soon as the engineer had made his report, a cabinet order appeared, whereby the king, after lamenting the losses sustained by his subjects,

jects, and praising the zeal and projects of Abbé Lolli, recommends to the banks in the capital to advance, upon sufficient security, to the undertakers of the restoration of the Emisfario, the sum of 6000 ducats—(£ 787. 10s.)—at $3\frac{1}{2}$ per cent. and to continue the advancement of the said sum, until the work should be completed, and the money paid off by the sale of the recovered lands.

After the above was sent to the press, I received the following copy of the royal dis-
paccio, addressed to the Abbé Lolli, together with the subsequent papers, which conclude all I have to say upon the subject.

AS the King has the happiness of his faithful subjects very much at heart, his Majesty has heard with infinite satisfaction, that you have not only taken unwearied pains to recommend the restoration of the Claudian Emisfario, as the only mode of drawing from the lake Fucinus the superabundant water which has done so much injury to his subjects,

and threatens a continuance of damage, but also that you have displayed so much resolution against the efforts of opposing envy, and at your own charges have supported the repeated examination of the affair. And although as a true philosopher you will find your greatest reward in the actual accomplishment of your wishes, yet his Majesty approving your measures, and having ordered them to be put in execution, is desirous of making use of your well known zeal, and therefore appoints you to superintend this useful work, with a certain monthly allowance out of the sum destined for its execution, until a suitable benefice can be provided for you. This is made known to you by the first chamber of finance, and by his Majesty's command. Given at the Royal Palace the twenty-eighth of August, 1790.

Signor GIUSEPPE LOLLI.

Ferd. CORRADINI."

" IN

"IN consequence of his Majesty's orders for the restoration of the Claudian Emissario, you are immediately to repair thither, in order that every thing necessary for that great undertaking may be prepared during the present autumn; and his Majesty allows you twenty ducats—(£ 3. 15s.)—a month, until you are nominated to the promised benefice. His Majesty also orders you to conform in every thing to the annexed instructions. Given at the Royal Palace the twenty-fifth of September, 1790."

Signor G. LOLLI.

FERD. CORRADINI."

*Extract of a Letter from NAPLES, dated 18th
December, 1792.*

"I CAN tell you but little satisfactory concerning the progress of the restoration of the Emissario, a dispute having put a stop thereto several months since. Two hundred and twenty-two canals of the great canal, and several gal-

leries and shafts, or pozzi, had however been previously cleared. The last pozzo that was cleaned, was more than 400 palms deep, from its brink to the bottom of the canal, but is not one of the deepest. All the machines, implements, and materials are there, and in good order."

SECTION XII.

From AVEZZANO to SALMONA.

AFTER taking a reluctant leave of my friends, I rode along the northern bank of the lake as far as Pescina, twelve miles from Avezzano, and had frequent opportunities of observing that the shore grew more and more marshy, which I attribute to the land immediately bordering upon the road being exceedingly neglected.

Pescina is a moderate town, situated in a valley, that extends from the Appennines to the lake, and is watered by a considerable stream. I was here recommended to two brothers, the Barons Tomasetti, of whom the layman is an honest open-hearted mountaineer, whilst in the amiable ecclesiastic I found a friend to the arts and sciences, who entertained

me with a learned and elaborate dissertation upon the situation of Marruvium. As his brother was a lover of agriculture and the the chase, and as I had long wished to gain some insight into the natural history of the lynx, which abounds among these mountains, I heard with much pleasure that he had frequently tamed and kept those animals in his house. Abbé Lolli had before given me some excellent accounts of the œconomy of that animal, upon which I had also made some observations in the royal menagerie at Naples; and I now exactly informed myself of every thing relative thereto.

Although Buffon and Schreber have given us very good accounts of the lynx, the naturalist will probably not be displeased at receiving some information about the species of lynx peculiar to the provinces of Abruzzo. It is frequently met with in the woods of Abruzzo Ultra, where it is called *Il Gatto Pardo*, and is smaller than a sort that is not infrequent amongst the Grison mountains, and which precisely

cisely resembles the species given in Buffon's Natural History—part xix—plate 21—French, octavo, and in Schreber's Sucking Animals—part iii—pl. 109—page 408. But the lynx of Abruzzo is of a darker colour, is from eighteen to twenty inches high, and from twenty-four to twenty-seven inches in length, to the root of the tail, which is four inches long. The male is larger than the female. The colour is whitish, with spots like stars, of a reddish yellow, inclining to a yellow gold colour. The hair is short and soft, the head large, and like a tyger's, with longish upright ears, terminated by a tuft of coarse, hard, and upright bristles. The eyes are large, and the teeth, claws, and whiskers are long and sharp. Had I been fortunate enough to procure a dead one, I could give a much more complete description; but I could not succeed in my endeavours. The actions of this animal exactly resemble those of a cat, like which it sits, runs, springs, eats, purrs, and sleeps; although all these actions are in proportion to its superior size. It is easily

easily tamed; and the Baron Tomafetti assured me that it ran about the house like a cat, was much attached to them, and was in no wise inconvenient, except from its extraordinary curiosity. Not a corner in the house, nor a moveable therein, remained unvisited; and a female lost its life by jumping down the hole in the privy. I was surprised to find that the domestic cat had an insuperable aversion to this animal; and I was assured that the moment a lynx was brought into the house, all the cats disappeared, and were seen no more during that animal's abode there. The lynx bears the privation of its freedom only so long as it is allowed to wander about the house; all those which the Baron sent to the royal menagerie having soon died of excess of fat, which was the case with that I saw there, and which also appeared extremely melancholy. The lynx of Abruzzo is unquestionably the most swift, subtle, and audacious beast of prey in Italy. It only wanders about in the night, and never is seen in the day, unless when in heat,

beat, or in search of provision for its young. It feeds upon all kinds of mice, moles, martins, ferrets, hares, badgers, otters, and even sheep and goats; neither are tame and wild fowl safe from its attacks. It watches for its prey, either upon the ground, or between the branches of a tree, and usually seizes it at the very first spring, even though it be on full speed; and from its ambuscade amongst the branches it successfully darts upon birds that are upon the wing. When it has killed such a large animal as a wild boar, or a roe-buck, it first sucks the blood out of the arteries, which seems to be its favourite food; after which it devours the soft parts of the head, neck, shoulders, and legs, together with the entrails, and leaves the remainder. When it fails in procuring a live animal, it contents itself with vegetables, or gratifies itself with all kinds of fruit. Its favourite place of abode is amongst thick and extensive forests, and in solitary districts, where it makes its retreat in hollow trees, or in holes and clefts in the rocks. It pairs only once a
year,

year, at the beginning of spring; and contrary to the custom of cats, which celebrate their nuptials with hideous cries, it remains perfectly silent. The female goes two months, and then brings forth two young ones, which are generally of different sexes. She suckles them during two months; and the young ones require two years to grow and be fit for pairing. It has been observed here that the lynx generally attains the age of twenty years. Sociability appertains not to its qualities; and more than one couple are rarely found in a district. Like all creatures upon earth, this also has its enemies, and is pursued by men, dogs, wolves, and large snakes. Flight is its first object; but when it is deprived of the means of escape, and is attacked and wounded, it defends itself against every description of enemy, with such fury and dexterity, that it is seldom overcome but by numbers of beasts, or the superiority of human sagacity. The lynx not only feeds occasionally upon the bodies of dead men, but even attacks children, and devours them. This animal is
seldom

seldom to be taken alive, except whilst very young, when it is frequently found playing upon the grass near the trees, or straying about the country in quest of its mother. It is sometimes taken in traps, but is generally shot. The attachment subsisting between a couple is remarkable; for when one lies dead upon the ground, and the hunters have retired to a certain distance, the other approaches its comrade, looks at it, goes round it, lies down by it, goes away, and returns several times, until it appears to have lost all hope of its being only asleep. The lynx furnishes man with a very warm and useful skin; and some profit arises from its fat and gall.

From what has been said, I think that the lynx of Abruzzo may be classed under the species which Schreber calls the lynx-cat. It is indeed smaller, and has very distinct spots; but that which I saw at Naples did not surpass our's in brilliant colours, and differs from it in nothing but in its production of only two young one's. *Ælian's* account of the lynx corresponds

responds so exactly with the one above described, that I am inclined to suppose him not unacquainted with that species*. As Pliny speaks of no lynxes in Italy, it may be presumed, that in his time none existed there†. Abruzzo abounds also with wild cats.

Early the following day I left Pescara, and passed by the priory of San Stefano, founded by an uncle of Cardinal Mazarin, who was born here. I was accompanied by two of the Baron's game-keeper's, who were to see me across the Furca Carosa, the highest crest of the Appennines, where the traveller is subject to more than one species of danger. In win-

* Idem de Lynce tradunt, magis esse simam quam pardum, et summis hirsutum auriculis. Pers hinc mirum in modum saltem valet, et ad retinendum quod contingerit periculis longe validissima.

ELIAN. Trid. Petr. Gill. et Cour. Geiner, lib. xiv. c. 6.

† Lynceæ vulgo frequentes et Sphyngeæ, fusco pilo, manibus in pectore geminis. Æthiopia generat.

PLIN. H. N. lib. viii. c. 11.

Peragrinæ sunt et Lynceæ, quæ claudunt oculos quæque pedum cecunt.

ISID. lib. xiv. c. 8.

ter he is exposed to a most violent north-east wind, which nothing is able to resist; for passing as it were through a tunnel, its piercing coldness stiffens every joint, and the strongest man is thrown down by its impetuosity. In summer, this pass, remote from the habitation of man, is so beset by banditti, that murders and pillage are the usual occurrences of the season.

Before I reached the highest point of the defile, I observed in some neighbouring valleys, and upon some gentle eminences, the finest pasture ground covered with the choicest herbs, that seemed to yield neither in quality nor number to the productions of our Alps. I was much surpris'd to find so few horned cattle in such a mountainous country as this; but the reason why sheep are the main objects of attention, seems to be owing to the great quantity of aromatic herbs that cover the pastures, and suit the sheep better than large cattle; neither have they here any sort of winter fodder; and as the plains are wholly sown with
corn,

corn, and grazing grounds and clover fields are entirely unknown, the sheep are sent in the winter into Apulia, and the plains of Abruzzo, near the sea. Whether it would not be better for the country, and greatly contribute to the advancement of agriculture, if they blended the breeding of oxen with that of sheep, is a question I shall not pretend to discuss.

The top of the Furca Carosa consists of limestone, as do almost all the Appennines; and in particular, the Gran Sasso d'Italia, the highest of them all. Its surface is cracked and laminated; and the detached pieces which have been carried down by the rains, and melting of the snow, into the vallies, there form the most extraordinary sort of pudding-stone. The soil of the Abruzzan plains principally consists of red clay.

Although I had the good fortune to escape the banditti, the remains of such as had been broken upon the wheel, and gibbeted upon the spot, convinced me of the existence of the danger. Upon such occasions the traveller

forgets

forgets the high sounding maxims of modern philosophy, which, overflowing with the milk of human kindness, loudly condemns all punishment by death. The defenders of such doctrines may have studied mankind in their closets, or in a well regulated town; but as men in most countries are not altogether as they ought to be, the words of holy writ* compose a wise and well imagined law, grounded upon knowledge of mankind, but of which the application must be decreed only after the most humane deliberation. The maxims of the estimable Beccaria were attempted to be practised in Italy, his native country; but experience has sufficiently taught that they suit this age as little as liberty and equality.

I descended along a narrow bushy valley to the inconsiderable village of Goriano Siculo.

* He that smiteth a man so that he die, shall be surely put to death. Exodus, ch. xxi. v. 12.

See also the greater part of the 35th chapter of Numbers, and many other passages in the Old Testament.

situated in an extensive valley, that opens towards the city of Aquila. The appellations of several places, either hanging upon the steep sides of this valley, or crowning the almost inaccessible points of the rocks, denote either the singularity of their situation, or the object of their foundation; for one is called *Castell Vecchio*, another, *Roccadi Jeri*, and the like. The names of a great many towns in *Abruzzo* commence with *Rocca*, being for the most part seated upon the summit of the mountains. Their half wild inhabitants, who differ but little from their ancestors in the refinement of their manners and customs, cultivate during summer the few acres they possess, but more frequently carry on the noble trade of robbery upon the highway; and in winter they and their families go down to the *Pontine Marshes*, and there earn a subsistence by their labour. I met whole caravans of these wandering tribes of *Abruzzo*. Although these people return home with money, I believe it would be more useful to the state if they remained

maintained at home, and were employed in some manufactories.

Little corn is cultivated in the neighbourhood of Goriano Siculo ; but from the extensive forests of oak, and the great abundance of swine, I presume that the latter form the principal object of rural attention and œconomy.

Instead of following the course of the valley, I ascended a hill on the opposite side, and from its summit discovered the whole delightful valley, watered by the Pescara, and forming a garden twelve miles long, and five broad. Towards the east it is covered from the furious Greco by the lofty Majella, and towards the west it is protected from the cold Maestro by the mass of mountains that surround the lake of Celano. Towns and villages are thickly strewn throughout the valley, and all the dangers of the Furca Carosa are forgotten in the contemplation of this charming country. It is a matter of infinite regret, that the surrounding mountains should be destitute of shady groves and verdant pastures, and unen-

livened by the foaming of a waterfall. "They are," as the Abbot of the Celestine convent at Salmons emphatically said, "the ugly frame of a most delightful picture."

From this charming point of view, a steep path re-conducted me into the valley, near Rojano, from whence passing through forests of almond-trees, orchards, and vineyards, I soon reached Pratola, a lordship belonging to the above-mentioned convent of Celestines. I here traversed a bridge over the Pescara, a considerable stream that falls into the Adriatic, near a fortress of the same name; and at the end of two miles across rich fields and luxuriant meadows, I arrived at the convent, which is fifteen miles from Pescina. The abbot received me with the greatest politeness, and proved to me that his order was not less hospitable than the Benedictine. I found him well versed in the sciences, but more particularly attentive to agriculture; and I learned that during his administration, the conventual lands have risen to an unexampled degree of prosperity, and
that,

that, to the great astonishment of his neighbours, he has adopted the modern discoveries and improvements. This convent, erected by Pope Celestine the Third, the founder of the order, is said to enjoy a revenue of 10,000 ducats—(£ 1875). Should any sovereign of Naples suppress this, and many other well-endowed convents, it is to be hoped that all striking abuses, disorders, and bad institutions, will at the same time be destroyed; otherwise it is really to be feared that the kingdom would become a sort of Siberian desert, impenetrable to every traveller.

This convent has more perhaps to fear from earthquakes, than from the prevailing spirit of reform. In the year 1703 it was utterly destroyed by an earthquake; but was soon rebuilt with additional magnificence and taste. When Aquila was reduced to an heap of ashes in 1706, the convent received some very smart shocks, but was only damaged in the newly completed arches. It must appear singular to every naturalist that the towns of

Aquila and Salerno, situated as they are, amongst the highest Appennines, should be so frequently visited by earthquakes. The first of those towns has often been wholly, or in great part, destroyed by that terrible phenomenon of nature; and in the beginning of October 1789, it received some severe shocks, which fortunately did no material damage. Perhaps the numerous caverns in the limestone mountains are amongst the causes; or perhaps a subterraneous fire still burns under the old volcanos in the Campagna di Roma, whose eruption being hindered by the weighty layers of earth and stones, creates vapours in the hollows, and causes commotions in the earth; perhaps the numerous mines of iron, and veins of sulphur, in the mountains of Abruzzo, engender that sort of vitrified matter whose developement produces subterraneous fire; or, perhaps, according to Thouvenet, one of the great veins thereof runs under the province of Abruzzo. But these doubts I must leave to the decision of the society of volcanists and anti-volcanists.

mmpf.

E. B. A.

Not

Not far from the convent, and at the foot of a mountain towering behind it, I examined with the greatest pleasure a flowery meadow, full of springs of fresh water, still called "Gli Fonti d'Amore." The environs are known, even to the common people, by the name of "La Bottega d'Ovidio;" nor will the classic reader need to be informed that the ingenious and amiable Naso was a native of Salmona*. That town, situated two miles from the convent, and belonging to the princely house of Borghese at Rome, contains nothing remarkable, but a modern statue of Ovid, a bust of that poet, which passes for antique, and the hospital of the Annunziata. This hospital, erected for the maintenance of the foundlings in Abruzzo, and endowed with an annual income of 9000 ducats—(£ 1687. 10s.)—was until

* Pars me Sulmo tenet Peligni tertia ruris

Parva sed irrigua ora salubris aquis.

Ovib. Amor. lib. ii. eleg. 16.

Sulmo mihi patria est, gelidis uberrimus undis.

Ovid. Trist. lib. iv. eleg. 10.

lately so ill regulated, that the children died in numbers. But the Chevalier Cotronghi, who travelled over this province with the benevolent view of ameliorating many of its institutions, represented this bad management to the king, and took such measures as have produced better regulations, and a more advantageous establishment. Upon this occasion I was assured that few countries have more benevolent and wealthy endowments than the kingdom of Naples, but that their intension is no where so badly fulfilled.

The conventual church, which I visited on returning from the town, is chiefly adorned with marble of the country, amongst which the Verds di Calabria, the Perseghino, and beautiful varieties of Breccia, particularly distinguished themselves. In general there is not much variety in the lapideous productions of this province. If we except the various sorts and distinctions of limestone, calcareous spar, gyps, stalactites, and tufa, of which there are singular specimens near Triverno, upon the
Piano

Piano di Cinque Miglia, and upon the banks of the Volturnus, the rest of the mineralogy is but little varied, and consists in what I have observed, and what the Chevalier Pignatelli, a lover of natural history, communicated to me, as follows. Upon the low hills near San Germano, upon the mountains near Valoscura Canzano, and upon the chain of Appennines, called Matese, are found layers of green and other coloured jasper, whose exterior crumbles into clay. Above Pettorano is found a species of green chert, of the finest grain; and near Sferza Cavallo, very large grey flint stones are frequently to be met with. I have before remarked, that the plains chiefly consist of clay, and the mountains, of limestone; so that I think it would be worth enquiring into the origin of the jasper, chert, and flint stones. The perfectly round limestone balls in a mountain that advances into the plain between Intro d'Aqua and Pittorano, have a very singular appearance. They are of different sizes, and some of them extremely large; and those which
have

have been sawn through, have displayed concentrated strata in the interior. Near Triverno and Isernia is found native sulphur, chiefly crystallized. The province is exceedingly rich in iron mines; and a very productive one was lately discovered upon the mountain of Arunzo, not far from the lake of Celano. There are many petrifications, though but few rare ones have fallen within my observation; but Abbé Fortis, who has visited this province, informed me that at Pietra Roja, above Correto, upon the Matese, were found some perfectly petrified fish, whose scales struck fire upon steel; but that his mineral harvest in Abruzzo had been otherwise as unprofitable as my own.

Though the environs of Sulmona are chiefly flat, much wine is there produced*; but the culture of corn is not neglected, and the Turkish corn is very much esteemed. Groves of almond-

* *Arva pererrantur Peligna liquentibus undis,*

Et vires in tenero fertilis herba sola.

Terra ferax Cœcia, multoque feracior arva,

Dat quoque bacciferam pallada granaq. æger.

NOTES TO THE TRAVELS TO NAPLES. OVID. AM. l. ii. cl. 16.

trees are frequently intermixed with the vineyards; but no attention is paid to the mulberry, or olive-tree, which, notwithstanding the assertion of Ovid, are pretended to be unadapted to the climate. It is hardly possible to conceive how the people of this country go on in the old track, without taking any pains to put their agriculture upon a more advantageous footing. The wine here is of little value, and yet new vineyards are daily made; whilst corn, oil, and silk, which on account of the neighbouring Adriatic, would be extremely profitable, are totally neglected; and if the inhabitants are asked the reason, they answer, that their ancestors did so before them.

During the whole afternoon the learned Abbot entertained me with an account of the remarkable things in the province, and particularly of the small sort of republican place called Sennarica, to the exact description whereof by Galanti I shall refer my readers. The whole flat part of the province, that lies near the sea, is cultivated in rice, and is extremely

tremely unhealthy; and in the mountainous parts, the inhabitants cultivate either corn, or olives, and almonds, but principally attend to the breeding of sheep. The hills that are clothed with oak coppices abound with the *Pietra Fungia*, out of which grows an excellent species of mushroom. Having had occasion to examine it with particular attention, I am of opinion that it is not a calcareous tufa, but a vegetable, out of which the mushrooms spring. Having put one of them into a vessel, and covered it four fingers deep with earth, according to the Neapolitan custom, I watered it daily, until upon the fourth of June a small mushroom, three lines broad, and nine lines high, appeared above the earth, and upon the eighteenth of June attained its full growth. The height of the pedicle, including the head, was eighteen lines, and the breadth of the head was five inches and ten lines. The lower part of the pedicle was two lines thick; and the head, underneath, was full of holes, resembling the meshes of a net. The flesh was milk white,

from

from six to eight lines thick, and covered in the middle with a skin that was quite white, in comparison with the brown and scaly border. At the first appearance of the plant, the colour of the head was a very dark brown; but when the mushroom was half grown, white veins appeared in the centre of the head, and gradually made the whole surface, but especially the middle, appear clearer. Upon the thirteenth of June, three days before perfect ripeness, all the scales had tufts of filaments at their points, and those were probably the blossoms. This sort of mushroom seems to belong to the *Boletus Linnæi*; but I know not what to say about the stone itself. When it is cut with a knife, the incision appears like that which is made in a truffle; and when it lies in the earth, it is soft, and yields to the impression of the finger. After I had procured one mushroom out of mine, no care, and no attention to watering could make it produce any more. Out of another mushroom stone I dug a half grown mushroom, in hopes of discovering the

the feed, or root; when it looked exactly as if I had taken an eye out of a potatoe*. This mushroom is so good to eat, that the stones are kept in the cellars of the principal houses at Naples, for the enjoyment of their fruit. Indeed the Neapolitans eat all sorts of mushrooms, and only consider as poisonous such as grow near a piece of iron, or old leather. If a piece of garlick, or a silver spoon, be put into the water in which the mushrooms are boiled, and remain unchanged, the mushrooms are eaten without scruple.

* In Abbé Rozier's "Observations sur la Physique, &c." in the thirteenth, and supplemental volume, p. 1. to 234, is a very extensive treatise upon the *pietra fungaia*.

SECTION

SECTION XIII.

From SULMONA to NAPLES.

EARLY in the morning I left the convent, and travelled four miles across the plains of Sulmona, as far as Pettorano, where the mountains again approach each other, and form a very narrow defile. The road then winds up the side of a mountain, and, after traversing an unfruitful bottom, soon reaches the hamlet of Rocca Valoscure, seated in a valley not much more agreeable. Three miles from Pettorano, and one before the hamlet, commences the new road, which it is intended to carry as far as Pescara, across the plains of Sulmona. As the people were now at work upon it, I had an opportunity of observing the whole process of its foundations, sides, and covering, and was persuaded that the inhabitants of the valley of Roveto had great reason to complain of it as they did.

did. It is every where much too narrow, shamefully dammed up, and carried through the most unserviceable country and places. Although there was ample room elsewhere, it has been made, near Rocca Valoscara, in the bed of a torrent, that annually damages it; and in fact it was unnecessary to bring it near this place, or along this steep and narrow valley; but such has been the general bad management of this road, that it has been carried across steep hills, and through insignificant places, although it might easily have been carried through towns well situated for trade and passage, and in a great measure over a level country. It is said indeed, that the engineers suffered themselves to be corrupted by private persons, and particular towns and villages, and that the whole road to Pescara might have been completed in the most handsome, durable, and commodious manner, with the money furnished by the province, and employed in making this ill-constructed part.

The country around Rocca Valoscara produces

duces some corn; but the place is principally supported by the breeding of sheep, and by this newly afforded passage.

I no sooner gained the head of this narrow valley, than I found myself upon the extensive Piano di cinque Miglia, a tract of land entirely destitute of habitations, and chiefly consisting of pasture, but producing a small quantity of barley and oats. At the end of this tedious plain, represented as dangerous on account of the depredations of robbers, I arrived at a very steep descent; and after passing by Rocca Rassa, a small town clinging as it were to a rock, and possessing few corn-fields, but large flocks of sheep and herds of swine, I entered a very extensive forest of oaks, through which the road winds during several miles, and conducts to Castell di Sangro, situated upon a river of the same name, 17 miles from Sulmona. This river is here nothing more than a destructive torrent; but at Lanciano it flows into the Adriatic in no inconsiderable width. The environs of Castell di Sangro have a poor, and miserable
E c appearance;

appearance; a few fields, frequently sown with Turkish corn, vary the eternal sameness of meagre pastures, arid and rocky hills, thinly scattered, and gloomy woods and villages upon the tops of mountains; nor does the country assume a more cheerful aspect during the nineteen miles that compose the distance between Castell di Sangro and Iernia. After traversing a constant succession of mountains, I was surprised, at the distance of 12 miles from Castell di Sangro, to find a rivulet shaping its course towards the Mediterranean, when on the other side of the hill I had crossed one, that flows towards the Adriatic. The former communicates with the Volturnus, and the latter unites its waters with those of the Sangro. In the neighbourhood of two sources, that take contrary directions, I might have expected to find the highest crest of the Appennines, and to have marked out the true course of that great chain of mountains; but these streams are separated by a very gentle eminence, wholly unconnected with any lofty hills. The Appennines

nines are isolated, unconnected masses; and the lofty Matese is separated by the Sangro from the Majella, which the river Pescara divides from the princes of the Italian mountains, the Monte Corno, and the Gran Sasso d'Italia. I cannot, with precision, say, whether the latter are connected with the Velino; but I know that the mass of mountains, encircling the Fucine lake, loses itself towards the south in small hills, and appears to be separated from the mountains, in the county of Molise, by the Sangro and the Volturnus. This singular distribution of the Appennines might almost authorize a conjecture, that they are elevations formed by the two seas, that wash the shores of Italy; and that on that account they have neither any connected chain, nor any regular valleys. The number of petrifications in the interior of the Appennines, will enforce this conjecture; whilst the plains of Italy may in general be allowed to owe their origin to the volcanos.

Between Castell di Sangro and Isernia, I

E e 2

found

found several flocks of sheep, journeying to the Tavogliere di Puglia; and I was now in that part of the kingdom which chiefly subsists in the breeding and fattening of sheep. The tract of land from Isernia to Popoli, at the north end of the valley of Sulmona, being an extent of 50 miles, and from the lake of Celano across the Marrone and Matese, being a tract of 60 miles, is a mountainous country, which, except the north part of the valley of Sulmona, contains but few towns, and some straggling villages, perched upon the summits of the lofty rocks. The inhabitants are still in an almost savage state, having little communication with those of the other villages, and being clad in a manner peculiar to each place during several centuries, and totally different in the respective villages. Thus a Greek mode of dress prevails amongst the females of Scanno, and a Gothic one amongst those of Rocca Valoscura. The women of Gallo wear a dress like that of the Franciscans; and it is impossible to discover to what nation, or what cause they are indebted

hunc: for

for it. This difference in the costume, not only between every province, but between almost every village throughout the kingdom, is extremely striking. All the men in the above district are entirely devoted to the care of the flocks; and indeed it may be said that all ranks of people are there wholly occupied in that business. The rich and poor, the priest and layman, the monk and nun, talk of nothing but their flocks; and the regulations formed in old time are yet most religiously observed.

Three hundred and fifty sheep make a morra, under the care of a pastore, or shepherd, a dairy-man, or buttaro, who takes care of the cheese, and an upper dairy-man, or butarachio. To these also belong two dogs, and a mule, that carries the utensils necessary for making cheese, and the few necessaries of the shepherds. Several morre form a mandra, over which preside a chief shepherd, or massaro, a sotto massaro, or under shepherd, and a capobuttaro, or head dairy-man, exclusive of those above-mentioned. These people always receive the

same wages (which amounts to twenty-four ducats—(£4. 10s.) a year in each of the three first posts), the same food, as bread, oil, salt, goats-cheese, and milk, and the same clothing, which consists of sheep-skins cut square, and sewed together, so as to leave passages for the head and arms, together with a very coarse shirt, breeches, of a cloth equally coarse, and sandals. They have also the same dwelling and bed, which is no other than mother earth, under a tent of skins. A boy of five years of age is entrusted with the care of eight or ten sheep, or goats, which he tends in the pastures of his native place. In his seventh year, he makes the journey to Apulia, as an under dairy-man, and receives, with the above-mentioned food and raiment, eight ducats—(£1. 10s.) for the first year, and one ducat—(3s. 9d.) more every succeeding year, until he is sixteen, when he receives 18 ducats—(£3. 7s. 6d.) a year, which are the wages of the under-shepherds. Thus the men live half the year in Apulia, separated from their wives, who in their absence take

take care of the little corn and vegetables necessary for their subsistence. This whole tract of country, which is thinly peopled, and badly cultivated, makes me think that neither the Tavogliere of Apulia, nor that part of Abruzzo which is chiefly devoted to the feeding and breeding of sheep, have thereby attained the highest possible degree of cultivation: for except at Arpino and Balena, where they make only the coarsest cloths, the wool of Abruzzo is not fabricated, but sold raw to the people of Trieste. I could tolerate the neglect of all other branches of agriculture, in favour of breeding sheep, only in case one part of the inhabitants planted herbs for dying, and attended to the process of colouring, which would be very practicable in the present neglected tracts of land, and worked up the wool into various articles of manufacture, and utility, and thus saved the kingdom the charges attending foreign importation, whilst the flocks were tended by the other part of the inhabitants.

The mode of life, and customs of the people of Abruzzo, which they perhaps inherit from the primordial inhabitants of Italy, or still more probably from the eastern hordes of shepherds who conquered and desolated that country, and which have been preserved during so many ages in the centre of Italy, cannot but be interesting to every observer of mankind. The wildness of their manners, customs, and ideas, belongs to those times, when men were in a perfect state of nature, as to their knowledge and religion.

Isernia, a dirty ill built town, containing 7000 inhabitants, affords nothing remarkable but the temple of San Cosmo and Damiano; which deserves attention, indeed, not so much on account of its exterior or interior splendour, as for the singular vows of the marriage-seeking nymphs, of which I shall speak more fully in my second volume.

The town is situated in a country, rich in vineyards, corn-fields, and fruit-trees, amongst which some olive-trees again present themselves

selves to view. It belongs to the county of Molise, a province of the kingdom of Naples, so little known, that as I am in possession of the account of a journey made thither by the Abbé Lonhano, I shall make no scruple of communicating some of his observations.

The county of Molise is a very uneven tract of land, composed of mountains and vallies, hills and dingles, and is divided by the Matese from the Terra di Lavoro, and by the Majella from Abruzzo. The summits of those lofty mountains are constantly covered with snow, and their sides are bare and rocky; but the vallies are cloathed with thick forests of oak, maple, box, fir, and other trees chiefly of the timber kind. The sole valley of Bojano forms a plain fifteen miles long and two broad. There are no lakes that are full throughout the year; but the country is watered by two considerable rivers, called the Tiferno and the Trigno, and by a variety of smaller streams. Those rivers contain a great number of trout, and the waters in the marshes are full of eels.

Ylledano

Limestone

Limestone and gyps are the prevailing compositions of the mountains, but there are also talc and petroleum, as well as volcanic productions in the neighbourhood of Castelluccio. The air of this province is in general healthy, except in some marshy districts. The inhabitants are esteemed industrious and laborious, and like worthy descendants of the Samnites, are great lovers of liberty. They amount to 170,000, of whom 20,000 or 30,000 annually leave their country in October, and repair into Apulia, the Capitanata, and the Terra di Lavoro, where as shepherds, artificers, day-labourers, servants, and handicraftsmen, they earn a livelihood, and return home about the end of April. Agriculture and commerce, arts and sciences, are wholly neglected in this province for want of proper encouragement. Though the country is uneven, and the mountains are steep and arid, this province must not be classed amongst the number of the unfruitful; for corn sown in the unmanured ground yields tenfold, and 1,800,000 tomoli of wheat alone are annually

annually reaped; of which 400,000 are exported either by means of the Adriatic, or across the Terra di Lavoro. Much Turkish corn, barley, vetches, and legumes are grown in this province, in which also all kinds of fruit-trees are frequently to be met with. Wine of a tolerable quality, and in no mean quantity, is made there; but the cultivation of the olive-tree, which, according to evident proof, would flourish there in a high degree, the culture of the silkworm, which has been checked by operations of finance, the care of bees, to which the aromatic plants, abounding upon the mountains, would give the greatest perfection, and the cultivation of flax and hemp, are on the other hand totally neglected. A few places attend to breeding horses and cattle, and very excellent cheese is made from the milk of the cows and sheep; but more attention is bestowed upon breeding sheep and swine; and of the former, the province contains 250,000, which for the most part winter upon the Tavoliere di Puglia, and annually produce

25,000

25,000 cantara of wool ; besides which, 30,000 sheep are annually disposed of to the butchers. Manufactures flourish as little as agriculture ; a few very coarse cloths are made of the wool ; and in some places, is a rope manufactory that turns to good account. Where the woods are not destroyed they make all sorts of wooden ware, and burn charcoal ; and there are some dying houses for colouring the coarse cloths. At Bojano, and some other places, several artificers in steel have lately attempted an establishment ; they deliver very excellent goods, of which I possess specimens ; but for want of encouragement, they are obliged to sell their commodities extremely dear, and having but slow and uncertain sale, must soon be forced to relinquish it. The inhabitants of this province carry on all kinds of handicrafts, by which they gain considerably both at home and abroad, and usually bring back a great deal of ready money earned during their winter excursions. At Ripalimosani the women, who, throughout the rest of the province, take care of the ground, are

are employed in making woollen stockings, which have a very extensive sale. In that town exists, since many centuries, the singular custom of giving no portion to the daughters, and yet there is not a single example of any one female handsome, ugly, or even ill shaped, remaining unmarried. The trade of this province is naturally governed by its manufactures and the state of its agriculture. They export corn, sheep, swine, colts, salted meat, cheese, skins, cordage, sacks, stockings, and bird-lime, but are obliged to import salt, oil, hemp, and flax, coarse and fine linens, and fine woollen cloths, from the surrounding provinces; tanned leather from Santa Maria di Capua and Guardia; iron and copper ware from Foggia, Cerreto, and Abruzzo; coffee, sugar, spices, silk goods, and hats, from Naples and Lanciano; wax and paper from Abruzzo; and asses, mules, and horses, from the fair at Gravina. The people of the Molise complain as bitterly as their neighbours of the abuse which some of the barons make of their feudal privileges;

nor

nor do they boast of the learning and morality of the greater part of their clergy.

From Isernia, I travelled as far as the Vulturis, between corn-fields, wine-yards, oak-forests, and bushy eminences, whose tops are generally crowned with a village. There being no bridge, I ferried over the Vulturis, which sometimes rises to such a height, as to cut off all communication by this road, and put a temporary stop to traffic. Shortly after this passage I reached Venafro, a small town containing 3000 souls, and belonging to the princeps of Avellina. Much corn, wine, legumes, and fruit, are produced in its small district; but it is principally remarkable for the excellence of its oil, and the quantity that is annually made there. The oil of this place was famous in the time of the Romans*; and

* *Quod far conferam campano, quod triticum Appulo,
quod visum Falerio, quod oleum Venafro?*

VARRO de Re Rust. lib. i. c. 2.

Ille terrarum mihi præter omnes

Angulus ridet, ubi non Hymetto

Mella

even now there are the best sort of olive-trees; amongst which the *Sergia* holds the first rank, and is said by Dr. Presta of Gallipoli, to be the *Licina* of Pliny*. In a good year 70,000 staia of oil are made here, and sold at 16 carlini (6 shillings,) the staio. The olive-grounds which I examined were in high order, and the trees excellently pruned.

This town has thrice changed its position. The Roman *Venafrum*, which lay more towards the south, was totally destroyed by an earthquake; and the same calamity annihilated it when built upon another spot. The present *Venafrum* was twice visited by the plague during the last century, and was destroyed by fire at the commencement of this; but the extreme fertility of the country allured

Mella decedant, viridique certat

————— *Bacca Venafrum.*

Horat. Od. vi. lib. ii.

*Maxime agro Venafrano, ejusque parte quæ Licinianum fundit oleum; unde et Liciniae gloria præcipua olivæ. Unguenta hanc palmam dedere, accommodato ipsa odore. Dedit et palatum delicate sententia.

Plin. H. N. lib. xv. c. 12.

the

the inhabitants to return, and it has resumed its existence, although as badly built as possible. The environs are richly furnished with fine springs of water, whereof one retains its ancient appellation of "Fons Papiria;" but I could not discover the mineral source mentioned by Pliny. Every one is astonished at the copious spring that rises close to the town, and immediately forms a trout stream: it is said to have been caused by the last earthquake, and that previous thereto, the inhabitants were forced to fetch their water from a distant spring. The Roman antiquities consist in considerable remains of an amphitheatre, the vestiges of a temple, and a number of medals and inscriptions.

The baron has in this town only the right of judicature with two courts of appeal, and enjoys the Bagliva in a singular manner; for the town pays him a certain sum for the common pasture lands, which it afterwards lets out. The town has also the following remarkable privilege, called *Il diritto della Spiglia*;

Spiglitia; at harvest time a number of poor people out of Abruzzo, and the circumjacent villages, come hither to glean, when each person is obliged to give the town a cornet of paper full of corn, which frequently amounts to 200 tomoli.

The barons of the surrounding lordships of Monte Rotondo, Capriati, Alifo, Laurenzana, and others, possess many more rights, amongst which are those of the oil-presses, and mills. The court has lately given a proof of impartiality, and love of justice, which will procure to it everlasting glory. The subjects of the baron of Laurenzana, having complained that their lord exercised privileges, to which he was not entitled, he was ordered by the court to prove the authenticity of his claims by documents; but as it was impossible for him to do so, he was forbidden to exercise his pretended rights in future. I was likewise assured, that the same method, and the same protection, stood open to every subject. Should such rights have actually been usurped, as may well be

the case in many instances, and should the documents of the well founded privileges not be destroyed or lost, this mode of restoring and settling the rights of man, is, in my opinion, much more noble than that which is now practised by the present apostles of liberty.

From Venafrò I travelled, in a two wheel chaise, 26 miles, in three hours and an half, to Capua, but saw nothing remarkable upon my route, except near Venafrò a magnificent stone bridge that conducts into a royal wood, twelve miles in circumference, and full of wild boars, where the king takes the diversion of hunting once in three years. From Capua I continued my journey to the metropolis, and thus terminated this interesting excursion.

APPENDIX.

*A CATALOGUE of such SHELLS as came to my
Knowledge out of the Sea, that bounds the King-
dom of NAPLES.*

Murice Baiano melior Lucrina peloris ;

Ostrea Circæis, Miseno oriuntur echini ;

Pectinibus patulis jactat se molle Tarentum.

HORAT. Sat. iv. lib. ii. v. 32.

SHELLS formed a part of such productions
of nature, in the kingdom of Naples, as
I wished narrowly to examine ; and I gathered
together, upon such parts of the sea-coast as I
had an opportunity of visiting, not only as
many marine bodies as I could, but also infor-
mation as to their usual place of abode, and
especially as to the inhabitants of the shells.

Fortune was particularly favourable to me at Naples, and Taranto. In the capital I resided near the sea, and in the quarter principally inhabited by fisherman. At Taranto I dedicated most of my hours to that pursuit; and by the powerful aid of my worthy friend, the archbishop, I formed a fine collection in that country, so singularly rich in shells. Although I passed only two years in the whole kingdom, and but a few days in most parts of it, I collected such a quantity of shells, and amongst them so many, which have hitherto been deemed foreign, that I conceive myself justified in communicating a catalogue of them to the lovers of natural history. And this I the sooner undertake, as the writers, who have treated of the shells in the Mediterranean, seem to have been unacquainted with many of those sorts which I shall describe. Rondeletius, who travelled over all Italy; Ceruto and Chiocci, the describers of Calceolarian museum; the indefatigable Aldovrandi; the laborious Buonanni, who was very particularly acquainted with

with the productions of the Neapolitan sea; and Valisnieri, who established correspondences at Taranto for the purpose, knew not that the greater part of the shells, hereafter described, were inhabitants of the Mediterranean. More is made known to us by later writers, and especially by Gualtieri, whose work has been infinitely useful to me; but would have been much more serviceable had he furnished us with the abodes of his shells. The *Opere Posthume* of Count Ginanni contain much excellent information, as I learn from Martini's "*Cabinet of Shells*." Giovanni Bianchi treats chiefly of the productions of the Adriatic, which for the most part might be found upon the Neapolitan coasts, but of which he has unfortunately described only a few. Neither have the authors resident in the kingdom, or such as have treated only of the marine bodies to be found there, been in any degree acquainted with all the treasures that lie hidden in those seas.

Fabius Columna, who was a long time professor at Naples, published at Rome, in 1606,

a quarto edition of his observations upon the history of some land and water animals, and, in 1616, a quarto treatise upon the purpura, and some other shell fish; but however estimable these performances may be, they are little satisfactory to the natural historian, on account of the few shell fish they describe.

Ferrante Imperati has also said but little upon the subject of shells, in his twenty books relative to natural history.

Bohadsch, who made several remarks in the kingdom of Naples, has communicated to us some ingenious, but short, observations upon marine animals, in his work "*De quibusdam Animalibus Marinis, nondum vel minus Notis, eorumque proprietatibus; cum Figuris*," published in quarto, at Dresden, in 1761.

Antonio Minasi, a Dominican Friar of Scilla, in Calabria, is well known on account of his passion for natural history, and has published several observations made by him upon fish and shells with much patience and attention; but it is to be regretted that he is not systematically

cally acquainted with that science. The translator and editor of the *Deliciz Tarentinz*, is, however, principally indebted to him for the notes relative to the shell fish. I have patiently perused that publication, and extracted much useful matter out of a vast mass of unprofitable erudition.

The Chevalier Joseph Gioeni, of Catanea in Sicily, has also published a small but comprehensive work in this branch, bearing the following title: "*Descrizione di una nuova Famiglia e di un nuovo Genere di Testacei, trovati nell Littorale di Catanea, da Giuseppe Gioeni Cav. dell' ordine Gerofol. con qualche Osservazioni sopra una Spezia di Ostriche;*" printed at Naples in 1783, and making a pamphlet of thirty-four pages, with an engraving. But as his observations are to be incorporated in the great work upon conchology, of which I shall presently make mention, I shall here pass over them in silence.

Tib. Cavolini, who is well known by his *Memorie per Servire alla Storia de' Polypi*

Marini, published at Naples in 1787, in two quarto volumes, with engravings, pays much attention to marine animals in general; but I do not find that he has hitherto treated upon shells.

I am quite ignorant of the catalogue of shells in the Tarentine sea, said to be made by the Archbishop Capece Latro; nor do I know of any other from thence, except the very meagre one, which Swinburne has given us in the account of his travels.

As therefore so little is known of the history of such shells as are to be found in that part of the Mediterranean which washes the shores of the Two Sicilies, I am the more induced to publish my catalogue. I am indeed too little acquainted with this branch of natural history, to satisfy the scientific conchologist with my attempts; but I have taken great pains to class every article according to Linnæus, and to describe, in his manner, such as were not to be found in his system. The reader will perhaps be surprised to find that many shells which
have

have hitherto been deemed peculiar to the seas of the other quarters of the world, are also to be found in the Mediterranean; but as I carefully examined the specimens, I can assert that except the size, and sometimes the brilliancy of the colours, many shells are to be found in our seas, that are usually sought for in the most distant regions. Such specimens as are of a peculiarly large size, I measured by the French foot, or pied du roi. I have cited no other delineations than what I found in Gualtieri, and the "Compleat Cabinet of Shells," by Martini, a work that answers the purpose of a whole library. Of such of my specimens as were not to be found in those works, or were strikingly different from those therein, I have given representations, with which I hope my readers will be satisfied. But as this catalogue is a very trifling contribution to the knowledge of the natural history of the Mediterranean, I shall refer all lovers of conchology to two performances that are about

to appear in Italy, and will enrich science with many novel observations.

The one is to be published by the Abbé Giuseppe Oliva, under the title of "Catalogo ragionato degli Animali e de' Vegetabili dell' Golfo e delle Lagune Venete; and I learn from Italy that the Abbé Oliva is a naturalist, from whom the most important observations may be expected. The other work is preparing by the tutor of the royal heir apparent of the Two Sicilies, Giuseppe Poli, who is the only person in the kingdom, except the Chevalier Gioeni, that possesses a cabinet of shells worth visiting, and who has undertaken to give the world a description of the shells found in the seas appertaining to his native country, under the title of "*Testacea utriusque Siciliæ, eorumque Historia et Anatome, Tabulis æneis illustrata.*"

In the introduction to his proposals, he says that the want of good descriptions of shell fish, the abundance of those animals in the seas that bathe the

the shores of his native country, and the admirable opportunities he has had, during several years, not only of acquiring, examining, and dissecting those animals, but also of watching their mode of life in the sea itself, have induced him to undertake this important and laborious work. It is to be divided into three parts; and, exclusive of the preface, is to begin with an introduction to the study of conchology, in which the author will establish the fundamental principles of the testaceology, zoology, and physiology of shell fish. The fashion or structure of the shells is then to be considered, with the progress of their increase in a like proportion with the fish that they contain. The true origin of pearls will here be pointed out, every thing relative to the formation of the shells will be chemically disserted upon, and succeeded by a short explanation of the anatomy of shell fish. This will be followed by an enquiry into the Linnæan mode of classing the molluscæ, in which certain defects will be pointed out, and the author's new method

commu-

communicated. Some remarks, grounded upon repeated experiments, upon the muscular force of those animals, the properties of their blood, and their mode of drawing breath, will then be offered; and the introduction will conclude with an explanation of the technical terms used in the first part; and such an explanation will be given with each part.

The author, following the Linnæan system, professes to treat first of the multivalves, secondly of the bivalves, and thirdly of the univalves. The shells, as well as animals of each class, are to be accurately determined and described; all the observations which the author (furnished with the best magnifying glasses and instruments) made, as well in dissecting them, as in discovering their modes of life, and places of abode, are fully to be related, and such of the old authors as have treated upon each sort, are to be referred to. In short, the author seems determined to give the most compleat history of every species to be mentioned in his book. Not only the shells, but their inhabitants

tants are to be delineated in a great variety of copper plates, and the work is to be ornamented with such head and tail-pieces as are analogous to the subject. The text is to be in Latin, for the accommodation of the learned of all nations; but at the close of each volume it is intended to give a French and Latin explanation of the plates. The first volume, containing the multivalves and bivalves, will be delivered at three different times; and the whole work is to be printed with the incomparable types of the Bodoni press at Parma.

According to the language of these proposals, the author seems to insinuate, that his performance will contain a variety of observations entirely novel, so that it highly merits the attention of every naturalist. It is to be lamented that, according to the present mode of speculation, all Italian treatises upon natural history should be rendered extremely dear by the costliness that attends their publication. But I hope that some able person, well acquainted with conchology, will make a concise

cise abridgment of the above work, in which every thing new and interesting will be separated from the extensive display and useless load of erudition so common to the Italians.

I must not omit saying, that the above work may be subscribed for at the Royal Parma Press; at Elmsley's, in London; at Ochi's, in Venice; at Terres's, at Naples; and at Molini's, at Florence. Whoever (according to the excise expression in the proposals) wishes to pay 'a great deal,' may have copies with coloured plates, upon making application in due season.

1793.

CATALOGUE

CATALOGUE OF SHELLS.

I.

SIMPLE UNIVALVES.

DENTALIUM.

1. **E**NTALIS. Linn. Edit. xlii. Syst. Nat. Testacea, sp. 786. Martini's compleat Cabinet of Shells, tom. i. tab. 1. fig. 1. From Taranto, where I also found the variety with a perfectly smooth shell and red apex, as mentioned in Martini, loc. cit. fig. 2.

2. Pollitum. Linn. 788. Mart. t. i. tab. 1. fig. 3. a. Taranto.

3. *Craff*

APPENDIX.

3. *Crassum*. Gualt. Mus. tab. 10. lit. 8, Mart. t. i. tab. 1. fig. 4. Testa recta continua striata. Taranto. They have very prominent striae, are half an inch in diameter, and are either earth coloured, or yellow.

4. *Elephantinum*. Linn. 783. Mart. t. i. tab. 1. fig. 5, 6. My specimen are red, and not green.

SERPULA.

5. *Erecta*. Mart. tom. i. tab. 2. fig. 12. a. Testa subflexuosa laevi, nitidissima alba. Taranto.

6. *Serpula intiotina*. Mart. t. i. tab. 3. fig. 19. Testa contorta, crassa, rugosa, albida, intus laevi. Taranto. In these shells, the whirls or twists are various; and some are shining within.

7. *Glomerata*. Linn. 800. Mart. t. i. tab. 3. fig. 23. Taranto,

8. *Contorta plicata*. Linn. 799. Mart. t. i. tab. 3. fig. 24. a. They are very frequent, and

* The names in Italics, being not mentioned by Linnaeus, are only given by me, until they are more systematically classed.

of various kinds, in every part of the Mediterranean.

PATELLA.

9. *Scissa*. Testa integra ovata sub conica striata sub albida fissura labiata laterali. Taranto. It belongs to the oval species of limpet, entire at the top, and having a smooth border; is finely striated on the outside, of a whitish yellow, with a perfectly white apex, and of a glossy white within. It differs from what I have seen, by a crack or aperture, extending almost three lines from the edge towards the apex, and terminating within side like a tubercle. As a species to me unknown, I have seen it in fig. 1. pl. VI. It is needless to prove that it has nothing in common with the patella fissura of Linnaeus.

10. *Tarentina*. Mart. t. i. tab. 8. fig. 62. Testa ovata compressa, margine inequali, apice acuto, radiis fuscis. Taranto. Although I suspect it to be the same as the figure in Martini, its great beauty, and a certain variety, have
G g induced

induced me to give a delineation of it. Pl. VI.
fig. 2.

11. *Granularia*. Linn. 756. Naples and Taranto. I received from Taranto a variety mentioned also in Mart. t. i. tab. 8. fig. 63; but mine is striped red instead of yellow.

12. *Cerulea*. Linn. 759. Taranto.

13. *Hungarica*. Linn. 761. Mart. t. i. tab. 12. fig. 107—108; but best described in Gualtieri, tab. 9. lit. w. Taranto.

14. *Græca*. Linn. 780. Mart. t. i. tab. 11. fig. 98 to 100; frequent upon all the shores of the kingdom of Naples.

II.

TURBINATED UNIVALVES.

ARGONAUTA.

15. *ARGON*. Linn. 271. Mart. t. i. tab.

17. fig. 157. One of my specimens, that is
fix

fix inches long, exactly corresponds with this figure; but another, smaller, and as white as snow, is like fig. 156, except that the teeth are black, and that not only the keel, but also the stripes and furrows bordering thereon, have a brownish shade. These shells are not uncommon in the bays of Taranto and Salerno, and upon the coast of Scilla; and though I hope that Poli will give us a compleat history of their inhabitants, I cannot help mentioning what Father Minasi says of them, in the notes to the *Deliciae Tarentinae*. Besides eight feet, the animal has ten mucilaginous sort of filaments, some whereof are short, and others a foot long, and hang out upon either side of the shell, when it swims. It not only possesses between the two fore feet a skin, which it uses as a sail, but on each side is a similar membrane that may be drawn out to the breadth of two fingers. Minasi asserts that the animal is fastened to the shell, and that he has seen the fibres which bind it thereto; but he does not deny that they, as well as the animal itself,

are of so frail a texture as to be very easily separated. He observed at the mouth a great number of antennae in the shape of feet; and he particularly examined into its method of moving. When it wants to raise itself from the bottom to the surface of the sea, it withdraws into its shell, whose orifice is turned towards the ground; and the feet being drawn up, like a compressed spring, to the body which lies close to the ground, are so suddenly and forcibly stretched out, that the animal and shell are raised towards the surface of the water; at the same time it discharges bubbles of air out of its eight feet, and moving out of the shell, rows with its feet, and thus conducts itself to the surface, whilst one outstretched foot keeps the shell in its proper direction. As soon as it gains the surface of the water, it turns the shell, expands its sail, uses its eight feet as oars, hangs out its fleshy part by way of rudder, and from thence stretches the above-mentioned filaments into the water. In general this singular navigator visits the solitary harbours, when
the

the sea is quite still, at the sultry noontide, and catches little fish and insects in its filaments, which it spreads out like a net. As soon as it makes any booty, or that the surface of the sea begins to be ruffled, but more especially when it discovers an enemy, it draws in its sail, oars, and net, lets some water into its vessel, and instantly descends. Almost all these observations were confirmed to me at Naples, Taranto, and in Sicily.

CONUS.

16. *Virgo*. Linn. 294. Mart. t. ii. tab. 53. fig. 585—586. Taranto affords the perfectly white, the yellowish, and those with a blue apex.

17. *Jaspis*. Mart. t. ii. tab. 55. fig. 612. Testa basi rotundata tota lutea fascia alba anfractibus albis. Although Martini says the small yellowish cones with a white fascia, which he received from the Spanish sea, were only damaged specimens, resembling his *conus jaspis*, I shall conclude the above under that distinction. I cannot however comprehend how

this and the two following cones, so frequent in the Mediterranean, should have escaped the notice of so many conchologists. 18. *Olivacea*. Mart. t. ii. tab. 55. fig. 613. Testa levi elongata, tota olivacea alba, maculata et fasciata; spira acuminata, prima melleis fuscis cincta, apertura violacea, margine fasciæque alba. Taranto. This cone would be very like Martini's figure, if it were adorned with celestial blue clouds.

19. *Humilis*. Testa gibba, tota fusca, fascia alba, anfrachibusque albis, basi rotundata cylindro duplo, longiore quam spira. Taranto and Naples. My books say nothing of this cone, which is two inches in length. When polished it is very glossy, and clouded rather grey. The orifice, with a white border, is either brown or blue.

20. *Monachus*. Linn. 304. Mart. t. ii. tab. 55. fig. 612. d. Taranto.

CYPRÆA.

21. *Lurida*. Linn. 395. Mart. t. i. tab. 90. fig.

Fig. 35. Very common, with and without fascia, and two inches long.

22. *Siciliæ*. Mart. t. i. tab. 27. fig. 267—8.

Testa subturbinata (ut lurida) lævi subnava fasciis pallidioribus albo guttata fultus crocea, fauce amethystea. There are many varieties, which have all a beautiful gloss.

23. *Pediculus*. Linn. 364. Mart. t. i. tab. 29. fig. 309. Taranto.

BULLA

24. *Spelta*. Linn. 372. Mart. t. i. tab. 23. fig. 215, 216. Taranto. My specimens are of a yellowish colour, with a white rim and lip.

25. *Ampulla*. Linn. 378. Mart. t. i. tab. 207. fig. 202—3. Taranto.

26. *Lignaria*. Linn. 379. Mart. t. i. tab. 27. fig. 195. Naples.

27. *Soluta*. Mart. t. x. tab. 146. fig. 1358. No. 1, 2, 3. Testa subcylindrica cornea fragilissima pellucida, spira manifesta, margine acuto, anfractu sulcato, apertura supra effusa,

fig. 1369. Taranto. Mine has not such lively colours as the above figure. Some are dark brown, with a yellowish brown band.

33. *Ballofa*. Mart. t. x. tab. 150. fig. 1409. Gualt. tab. 27. Testa subcylindrica fragili, nitidissima spiræ obtusa, Collumella quadruplicata; apertura effusa. Taranto. Except in size it much resembles the one described by Gualtieri; but as it does not perfectly correspond with Martini's, I have given it in plate VI, fig. 3.

BUCCINUM.

34. *Galea*. Linn. 439. Mart. t. iii. tab. 116. fig. 1070. Is found in various places, and sometimes as big as a man's head.

35. *Dolium*. Linn. 442. Mart. t. iii. tab. 118. fig. 1082. Very common near Taranto.

36. *Echinophorum*. Linn. 443. Mart. t. ii. tab. 41. fig. 407—408. This is one of the most common shells in the Neapolitan sea. They are of strong and weak mixtures of colours. I also got at Naples the variety, No. 11, of Martini; loc. cit.

37. *Arcola*.

37. *Arca*. Linn. 451. Gualt. tab. 39. lit. b. Naples. One of my specimens, three inches long, comes nearest to the figure and description of Gualtieri; but a smaller has a still greater resemblance to that in Martini, t. II. tab. 34. fig. 351—354, except that it is perfectly white.

38. *Mutabile*. Linn. 460. Gualt. tab. 44. lit. a. Naples. The colours of my specimens are extremely various. I have white, white and yellow spotted, brownish yellow, and brown and black spotted.

39. *Reticulatum*. Linn. 476. Gualt. tab. 44. lit. a. There are white with brown spots, and brown with whitish yellow clouds. Taranto.

40. *Nassula*. Mart. t. iv. tab. 124. fig. 1162—3. Gualtieri, tab. 44. lit. c. Testa parva, canaliculata, sulcata, rugosa, striata, lineis circularibus albidis et fuscis. Taranto.

STROMBUS.

41. *Pes Pelicani*. Linn. 490. Mart. t. III. tab. 85. fig. 848 to 850. Gualt. tab. 53. lit. A.

3. *Cardium*. This very common shell is found as well with scattered single spines, as with those ben-
 netted together by a skin. Mart. *tab. 149. fig. 1389*
 and 1390. Gualt. *tab. 52. lit. 2.* *Testa crenu-*
culata, acuminata, dentata, raris et emicatis-
bus striis circumdata. Yellow and black, white
 and dark brownish, white and red. Taranto:
 where also I found the one mentioned in Mar-
 tini, *loc. cit. fig. 1378 and 1379.*

MUREX.

43. *Brandaris*. Linn. 331. Mart. *tab. 114. fig. 1058 and 1059.* Gualt. *tab. 30. lit. 2.*
 This is likewise found upon most of the Nea-
 politan coasts. I have specimens from Taranto
 that exactly correspond with the figure in Gual-
 tieri, and are of the greatest beauty on account
 of their very perfect spines. The inhabitant of
 this shell, as well as of the purpura, is in gene-
 ral the most voracious of all shell fish, and so
 ravenous as to attack even the shells taken in
 the nets, by which means it also becomes the
 prey

prey of the fishermen; and hence the saying, "*Edaculosus purpuris*." Of this sort of shell consists nearly the entire hill upon the shore of the Mare Piccolo at Taranto, called by the inhabitants Monte Testaceo. This circumstance, and the favourite tradition in the town that the purple dye was there prepared, have induced me to think that it might have been procured from this shell-fish. I am far from undertaking a critical examination of this subject, especially as it has been amply treated by Amati, in his work "*De restitutione Purpurarum*," and by the Chevalier Rosa, in his treatise "*Delle Porpore e delle Materie vestiarie*;" and as both Oliva and Poli will probably examine the question with the greatest accuracy, and more precisely determine what were the shell-fish employed by the ancients for procuring the purple dye. I shall only remark, that some very imperfect experiments, made at Taranto with the inhabitant of the *murex brandaris*, have proved that a colour like purple is to be procured from that animal. It may be said, that

as the Romans were, according to Martial, extremely fond of that fish, the above-mentioned great heap of shells may be nothing more than a monument of their gluttony; but in that case we should find many heaps of other shells, whose inhabitants were equally precious to them, and which are alike abundant at Tarranto. The experiments of the Abbé Oliva (communicated by him in the sixth article of the fourteenth part of the *Opuscoli selti di Milano*) prove indeed that the *buccinum echinophorum*, the *buccinum lapillus*, the *helix janthina*, and the *arca nucleus*, likewise produce a purple liquor; but I am inclined to believe that the various tints which the ancients knew how to give to their wool, are to be ascribed as much to the difference of the shell-fish they employed, as to the mode of preparation.

44. *Trunculus*. Linn. 522. Mart. t. iii. tab. 109. fig. 1018 to 1020. This is very common in the Neapolitan seas, both with and without teeth, and is sometimes white with bright red fasciæ, and sometimes with dark brown ones.

A canc.

Acanth. boyardi. Linn. had established itself in one of these shells: they are frequently found in the porcellane, conic, and cylindric; and after various observations, it appears that they not only fix themselves in empty shells, but even destroy the inhabitants, in order to become possessors of their dwellings.

45. *Pileate*. Linn. 534. Mart. t. iv. tab. 130. fig. 1246 to 1249. Gualt. tab. 49. lit. a. This shell is not infrequent in the Neapolitan sea, and is generally white, with brownish red spots upon the lips; though the whole ground is sometimes of a reddish yellow, with white raised striae. There are other varieties in the form and structure, of a very neat composition.

46. *Rubecula*. Linn. 536. Mart. t. iv. tab. 123. fig. 1260. Gualt. tab. 49. lit. v. and 1. There are also specimens of a glossy brown, with white tubercles.

Parthenopous. Mart. t. iv. tab. 131. fig. 1252

—3. My specimen corresponds exactly with Chemnitz's description; but as there is a difference in the figure, I have given it in pl. VII.

fig.

fig. 4. It might be thus systematically described; testa costata tuberculata subventricosa, apertura oblonga rostrata, labro duplicato. As I had it out of the bay of Naples, I hazard giving it the above appellation.

48. *Reticularis*. Linn. 538. Mart. t. iv. tab. 128. fig. 1228. Gualt. tab. 50. lit. A. This beautiful shell comes likewise out of the bay of Naples, and measures nearly four inches. The ground is milk white, with bright vermilion cheeks. As the colours are much more lively than those of Martini's, and as my specimen wants the row of round tubercles upon the first wreath, I have given it in pl. VII. fig. 5.

49. *Javanus*. Linn. 550. Mart. t. iv. tab. 143. fig. 1434 and 1435. Taranto. Linneus's description exactly corresponds with my specimen; but the figure in Martini is without the circuli nodosi.

50. *Fusiformis*. Testa turrita, tuberculata, rostro flexuoso incurvato, labro intus crenulato. Naples. This shell comes nearest that in

in Martini, t. iv. tab. 145. fig. 1349 and 1350.

51. *Senilis Lucis*. Testis fusiformi, rostro
 infra longiore, labio intus crenulato, spiris to-
 nuissime carinatis; anfractibus modestis. Naples.
 This very elegant shell appeared to me to merit
 a delineation. See pl. VII. fig. 6. It is not
 unlike that in Martini, t. iv. tab. 145. fig. 1351
 —2. I gave it the above appellation in honour
 of that quarter of the city of Naples which I
 inhabited, and because I received most of my
 shells from the fishermen who dwell there.

52. *Tritonis*. Linn. 560. Mart. t. iv. tab.
 134. fig. 1277, and tab. 135. fig. 1282 and
 1283, as also tab. 136. fig. 1284 and 1285.
 This shell is rather common; the larger sort
 frequently attaining the length of ten inches.
 I have it with the cover.—The above cited
 variety seems to be a native of the bay of
 Naples.

53. *Cornus*. Linn. 565. Gualt. tab. 46.
 Tit. 7. Common in the Neapolitan sea. The
 colour is generally brown, with white marks,
 and

and four-cornered spots, which however do not succeed each other so regularly as upon the *murex pufio*; neither has this the anfractus *marginibus complanatis*.

54. *Lignarius*. Linn. 566. Gualt. tab. 52. lit. c. Tamaro. The description in Linnæus, and the figure in Gualt. correspond tolerably well with my specimen. But I saw no resemblance between that and those in Martini. t. iv. tab. 122. fig. 1131 and 1132. tab. 123. fig. 1134 and tab. 143. fig. 1133 and 1135. They are of an incarnate colour, with white tubercles.

55. *Polygona*. Testa subfusiformi truncata polygon. striata angulosa, spiris octo scalatis medio margine acuto nodosa. Mart. t. iv. tab. 140. fig. 1308 and 1309. Naples. The colour is white.

56. *Syracusanpa*. Linn. 568. Mart. t. x. tab. 162. fig. 1542 and 3. This shell, which measures rather more than two inches, is found in the Sicilian seas, and near Naples and Tamaro, and is either white and yellow, white and brown, or white and vermillion.

2UHOCTF. H h

57. *Aluco*.

57. *Aluco*. Linn. 572. Linnæus's description, especially in the mus. ultr. is so perfectly correspondent, that all other references are needless. It is found at Naples and Taranto, sometimes with dark brown, and sometimes with bright red spots. The sixth tubercle of the first spire is not evidently the largest upon all, although it is upon the greater part.

58. *Acus*. Testa subulata tenuissima, anfractibus crinulatis fulcatis, spiris cinctura distinctis, apertura lævi. Taranto. Mart. t. iv. tab. 154. fig. 1449.

59. *Strombiformis*. Gualt. tab. 52. lit. d. Testa turrata, scabra, tuberculata, albo fusco punctata, apertura rotundata strombiformi. Taranto.

60. *Cancellata*. (*Voluta* Linn. 413). Gualt. tab. 48. lit. c. Taranto. I hardly dare to vary from Linnæus; but this pretty shell, which he has so accurately described, evidently appears to me to belong to this class.

TROCHUS.

61. *Striatus*. Linn. 597. Mart. t. v. tab. 162. fig. 1527 and 1528. Taranto.

62. *Conulus*. Linn. 598. Mart. t. v. tab. 166. fig. 1588. to 1591. Naples and Taranto; and the variety, fig. 1591, I procured at Taranto.

63. *Tesselatus*. Mart. t. v. tab. 166. fig. 1583 to 1587. M. de Born thus describes it; Testa conica, anfractibus rotundatis, transversim striatis, columella obsolete perforata. It is common upon all the shores of the kingdom; and it seems scarcely possible, that it should have escaped the notice of Linnaeus. Amongst the endless varieties of this shell, I shall mention only the following.

a. The cubic and regularly placed spots adorn only the half of the first wreath. The rest, together with a part of the second, is black, with greenish white waves. The apex is either a clear red, or green.

b. This is so beautiful, that it is easier to delineate than describe. See pl. viii. fig. 7.

modification

H h a

c. Mart.

c. Mart. Loc. cit. fig. 1593.

160. Gualt. tab. 63. lit. c.

c. This has irregularly disposed blood-red ridges and spots upon one half of the first ventral, and the rest is spotted black, as far as the mother of pearl coloured apex.

64. Zezyphinus, Linn. 599. Mart. t. v. tab. 166. fig. 1591 to 1594. Naples. Of various colours, dorsal and ventral.

65. *Nepes*. Mart. t. v. tab. 166. fig. 1602.

Nel. 1. 230. Taranto. These are quite white, and yellow, with brown fasciæ.

66. *Diculus*. Mart. t. v. tab. 170. fig. 1625.

Testa subumbilicata coniformi, spiris nodosis, anfractibus cœcure distinctis, apertum subargentia. Taranto. This beautiful shell is grey, with blackish longitudinal, and broken fasciæ. The spires are separated by an elevation like a pearl necklace, and studded with tubercles. The apices are plain, and of a feeble mother of pearl colour.

69. *Thelyseris*. Gualt. tab. 63. lit. A. N.

Testa subumbilicata leviter foveo viridescanti, anfractibus

anfractibus linea punctis albis et roseis interruptis circumdatis, spira prima magis bullata. Taranto. I think this shell is somewhat allied to the *Cochlea Euharis*. It is very beautifully marked, and, except the white spots, has a mother of pearl coloured mouth.

68. *Magus*. Linn. 385. Mart. t. v. tab. 171. fig. 1656 to 1660. Near Naples and Taranto, in the following varieties.

a. A beautifully bright red shell, with dusky red spots. My specimen has no white, and has much more brilliant colours than that in Mart. loc. cit. fig. 1656 - 7.

b. White, with brown spots upon the first wreath; the rest is mother of pearl colour. See pl. viii. fig. 8.

c. White, with brown spots all over it. Mart. loc. cit. fig. 1659.

d. White, with very fine red stripes.

e. Small, with white, yellow, and red spots.

69. *Ardens*. Mart. t. v. tab. 171. fig. 1668.

Testa umbilicata, spiris fulcatis, anfractibus distinctis, apertura argentea. Naples. The

red apert, and the pearl necklaces, convince me that Chemnitz had before him the same sort of shell as I have; but, as I find essential differences in comparing my specimen with his figure, I shall give it in pl. viii. fig. 9. There are great varieties in the colour.

70. *Rosus*. Mart. t. v. tab. 171. fig. 1675. Testa umbilicata leviter tuberculata, apertura dentata, labio intus serrato, tota sanguinea. Taranto.

TURBO.

71. *Pullus*. Linn. 160. If the angle in the orifice were more distinct, my specimen would precisely correspond with the Linnæan description. There is a variation in the breadth of the stripes. Taranto. Small, see pl. viii. fig. 10.

72. *Rugosus*. Linn. 618. Mart. t. v. tab. 180. fig. 1782 to 1785. Common all over the Mediterranean.

73. *Calcar Mediterraneæ*. Mart. t. v. tab. 180. fig. 1786 and 1787. Gualt. tab. 65. lit. p. Testa subimperfurata depressa, anfractibus spinis

nis compressis elevatis, basi striis concentricis.

Naples.

74. *Ruber*. Mart. t. v. tab. 185. fig. 1855. Testa imperforata convexa levi, apertura rotunda, nitidissima tota rubra. Taranto. Small.

75. *Costatus*. Gualt. tab. 44. lit. v. Testa imperforata subconica, spiris costatis, apertura rotundata, labiata, tota nitida alba. Taranto. Small.

76. *Flammeus*. Testa imperforata, spiris convexis, apertura ovata integra, tota nitida, punctis, lineis ac maculis rubris nigrisque depicta. Taranto. See pl. viii. fig. 11.

77. *Sanguineus*. Linn. 623. Mart. t. v. tab. 177. fig. 1756 and 1757. Taranto.

78. *Clathrus*. Linn. 631. Mart. t. iv. tab. 153. fig. 1434 to 1438. Near Naples and Taranto; either entirely white, or with reddish spots, or sometimes with grey yellowish ones.

79. *Terebra*. Linn. Mart. 645. t. iv. tab. 151. fig. 1416. Taranto. Quite white.

HELIX.

80. *Aspersa*. Mart. t. ix. tab. 130. fig. 1136 to 1138. Testa imperforata subglobosa fuscis, fuscis quatuor rufis, maculis albis interruptis, labro candido. Near Naples.

81. *Sarabii*. Mart. t. ix. tab. 133. fig. 1208. Testa umbilicata, depressiuscula transversim fuscata, aspera apertura sublabiata ovata. Poestum.

82. *Nemorana*. Linn. 697. Mart. t. 9. tab. 132. fig. 1196 to 1198. Common in all the Kingdom, and with various fasciæ.

83. *Decollata*. Linn. 695. Mart. t. 9. tab. 136. fig. 1254 and 5. Taranto.

NERITA.

84. *Cancrena*. Linn. 715. Mart. t. v. tab. 136. fig. 1860 and 1861. Taranto and Naples. Except that in my specimens, the cavity of the Umbilicus is brown, they are perfectly like the figures in Martini. The shell measures rather

rather above an inch and an half, and is either of a bright or darkish brown colour.

85. *Glaucina*. Linn. 716. Mart. t. v. tab. 186. fig. 1856 to 1859. Naples.

86. *Punctata*. Mart. t. v. tab. 186. fig. 1862 and 1863. Testa umbilicata ovata laevi, punctis distinctis ubique adpersa, umbilico aperto, callo centrali attenuato. The bays of Naples and Taranto are the habitations of this nerite. It is sometimes studded with red, and sometimes with brown points; and there is a variety whose points run together, and whose apex is white with a blue fascia. The interior of the orifice is violet. Its cover, like that of most of my nerites, is white.

87. *Ala Papilionis*. Mart. t. v. tab. 186. fig. 1868. Testa umbilicata ovata, punctis et maculis rufis albisque regulariter alternatimque cincta, umbilico subaperto, callo laterali. Naples. As the large *Ala Papilionis* has a Linnean name, this also may be so termed.

88. *Maculata*. Mart. t. v. tab. 186. fig. 1878 to 1880. Testa umbilicata ovata albida punctis

punctis fuscis adpersa ac maculis fasciata, umbilico subovato, callo centrali. Naples. With a stony sort of perforated cover.

89. *Maroccana*. Mart. t. v. tab. 188. fig. 1905 to 1910. Testa umbilicata lævi lucidissima, lineis fuscis undata, apice acuto, spira posterior violacea, umbilico subcompresso. Naples. The ground, and the longitudinal waves, are either of a light, or dark colour.

90. *Candidissima*. Mart. t. v. tab. 188. fig. 1904. Testa umbilicata, callo gibbosissimo, tota alba nitidissima, apice obtuso. Naples.

91. *Mammilla*. Linn. 719. Mart. t. v. tab. 189. fig. 1928 to 1931. Naples.

HALIOTIS.

92. *Tuberculata*. Linn. 741. Very common every where.

93. *Parva*. Linn. 764. Mart. t. i. tab. 14. fig. 137. and tab. 15. fig. 145. Taranto. A variety has a green transverse rib upon the back.

94. *Glabra*. Mart. t. x. tab. 166. fig. 1602. Testa ovata auriformi, læviuscula solida, ex viridi

viridi et albo variegata, foraminibus sex pervia,
labio interno latiori, spira compressa. Taranto.

95. *Pellucida*. Testa ovata utrinque nitida.
Taranto. I had almost thought it might be the
Haliotis *Midæ*, of Linnæus; but neither Gual-
tieri's delineation, nor the sea ear, given under
that name by Martini, correspond perfectly with
mine. It is of a mother of pearl colour on
both sides of the shell, for the most part smooth,
finely striped, and pierced with six holes. The
spire is raised and sharp, and the border rather
broad. The largest measures an inch and an
half in length, and an inch in breadth.

III.

BIVALVES.

MYA

96. *GLYCYMERIS*. Testa maxima ovata
utrinque triante, dente ferratissimo. Mart.

t. vi.

t. vi. tab. 3. fig. 25. Taranto. It is also found in other parts of the kingdom, and of considerable size. I have a half petrified one, that is more than 10 inches long. I suspect, but with no degree of certitude, that the mullets, called at Taranto, Camadie di Luna, and at Naples, Vonghole, are properly the shell-fish now before me. They are eaten in great quantities, and particularly used in broths. Whether the Pelorides of the Romans, which, according to Macrobius, were esteemed great delicacies, be the above-mentioned shell-fish, I shall not pretend to determine. They chiefly remain in the sand, and are generally open.

SOLENN.

97. Vagina. Linn. 33. Mart. t. vi. tab. 4. fig. 26 to 28. Frequent at Naples and Taranto, where they are called Canolichij, and are eaten in great quantities. The best are found in the Mare Piccolo, not far from the mouth of the Galefus, in sand, and where the water is rather deep.

98. *Ensis*. Linn. 35. Mart. t. vi. tab. 4. fig.

30. Taranto.

99. *Strigilatus*. Linn. 39. Mart. t. vi. tab. 6. fig. 41 and 42. Naples.

100. *Vesperus*. Mart. t. vi. tab. 7. fig. 59 and 60. Testa ovali antice hiantē, albida versus cardinem et intus violacea, radiis pallide rufis violacesque. Taranto.

101. *Violaceus*. Testa ovata subcompressa, antice triante, cardine altero bidentato, tota violacea, fascia alba. Taranto. I had almost taken this for the *Tellina Gari* Linn. but as it has neither the angular bend within, nor the oblique transverse striae, but is generally very smooth, it appears to me to be a variety, hitherto but little known, and, upon that account, I have given it in pl. ix. fig. 12.

102. *Anstinus*. Linn. 40. Mart. t. vi. tab. 6. fig. 46. Taranto. According to the hinge, my specimen perfectly corresponds with the figure in Martini, except that the shell is not so brittle, and has longish, crooked lines.

TELLINA.

TELLINA.

103. *Virgata*. Linn. 46. Mart. t. vi. tab. 8. fig. 72. Taranto.

104. *Angulata*. Linn. 74. Mart. t. vi. tab. 9. fig. 74 and 75. Taranto.

105. *Fragilis*. Linn. 49. Mart. t. vi. tab. 9. fig. 84. Taranto.

106. *Polygona*. Mart. t. vi. tab. 9. fig. 77. Testa oblonga transversum sulcata, bis inflexa, tota alba. Naples. Mine is not quite so broad, but somewhat longer.

107. *Planata*. Linn. 52. Taranto. I cannot, with certainty, thus class my specimen, although I find no description that comes nearer to it. All the Linnæan attributes perfectly correspond, except that in my specimen the border is not red, but white or grey, and all the rest is flesh-coloured. The hinge is furnished, in one shell, with a split main-tooth, and a side tooth; and in the other shell, with two teeth, one of which is a double tooth, and the other a single one.

108. *Carinata*. Mart. t. vi. tab. 10. fig. 87.
Testa ovata compressa antice inflexa, cardine
unidentato alterius duobus tota albida fragilissi-
ma. Taranto.

109. *Opalina*. Mart. t. vi. tab. 12. fig. 107
and 108. Testa subovata, tota alba opalina,
intus costata. Taranto. The iris colours
playing upon the outside, and the inside ribs,
sufficiently distinguish this shell, which is other-
wise very smooth, glossy, and quite white.

110. *Divaricata*. Linn. 35. Mart. t. vi. tab.
13. fig. 129 and 130. Taranto.

111. *Incarnata*. Linn. 58. Mart. t. vi. tab.
12. fig. 110. Taranto.

112. *Remies*. Linn. 62. Mart. t. vi. tab. 12.
fig. 113. Taranto.

113. *Carnaria*. Linn. 86. Mart. t. vi. tab.
13. fig. 126. Taranto.

114. *Fasciata*. Testa oblonga parum in-
flecta, cordinis, dente unico altera duobus,
nitida, grisea, fasciis albis transversalibus.
Taranto. This tellina, which is not to be
found in my books, distinguishes itself from all
others,

others, as well by the construction of its hinge as by its glossy softness, which is rendered somewhat unequal by a number of lines, running parallel with the border. It is grey, ornamented with two double milk-white fasciæ, running along its breadth; and the inside is furnished with an oblique longitudinal rib.

CARDIUM.

115. *Costatum*. Linn. 73. Mart. t. vi. tab. 15. fig. 151 and 2. I could procure at Taranto only one specimen of this heart shell, measuring 2 inches long, and 3 and an half broad: upon the ribs on one side, are projecting asperities that give the border of the shell the appearance of a saw; and upon the other side, the first eleven ribs have excrescences, resembling obliquely placed hollow tiles. It is singular that the authors before me, make no particular mention of these asperities and excrescences, although my specimen is undoubtedly the *Cardium Costatum*.

116. *Cardisa*. Linn. 74. Gualt. tab. 83. lit.

lit. D. Taranto. My specimen comes nearest to that described by Chemnitz, Mart. t. vi. p. 153. having a perfectly smooth border. But it is white, with beautiful red streaks upon the upper side, and has a much thicker shell than the Indian.

117. *Aculeatum*. Linn. 78. Mart. t. vi. tab. 15. fig. 155 to 157. Common near Naples and Taranto. The varieties with 21 ribs, and very fine sharp spines, and those with 36 ribs, and thick asperities, are also found there.

118. *Echinatum*. Linn. 79. Mart. t. vi. tab. 15. fig. 158. Taranto.

119. *Ciliare*. Linn. 80. Mart. t. vi. tab. 17. fig. 171 and 172. Taranto.

120. *Tuberculatum*. Linn. 81. Mart. t. vi. tab. 17. fig. 173. Near Naples and Taranto. Some are quite brown, and some entirely white; others are of a bright yellow, and others white with brown fascies; in short, the varieties are innumerable.

121. *Serratum*. Linn. 82. Mart. t. vi. tab. 18. fig. 189. Naples.

122. *Oblagus*. Mart. t. vi. tab. 19. fig. 190.
Testa oblonga antice laevi cordiformi, postice
laevi supra longitudinaliter striata, margine
medio dentato, tota fusca. Taranto.

123. *Papyracus*. Mart. t. vi. tab. 18. fig.

184. Testa cordata fragilissima longitudinali-
ter striata cinerea maculis purpureis, margine
serrato. Taranto.

MACTRA.

124. *Striatula*. Linn. 96. Mart. t. vi. tab.
21. fig. 205 and 206. Taranto.

125. *Corallina*. Linn. 98. Mart. t. vi. tab.
22. fig. 218 and 219. Taranto and Naples.

126. *Stultorum*. Linn. 99. Mart. t. vi.
tab. 22. fig. 224 to 226. Very common every
where.

127. *Papyracea*. Mart. t. vi. tab. 23. fig.

221. Testa triangulari subinflexa inflata, lon-
gitudinaliter striata, sulcis transversis, tota alba.
Taranto. My specimen perfectly corresponds
with the above-cited figure, except that it is
not so thin and transparent.

DONAX.

DONAX.

128. *Trunculus*. Linn. 105. Mart. t. vi. tab. 26. fig. 253 and 254. Besides the two varieties given in pl. ix. fig. 13 and 14, I have the following, all found at Taranto:

- 1. Yellow, with blue transverse stripes.
- 2. Whitish, with violet transverse stripes.
- 3. White, with violet spots running near the border.

4. Horn colour, with and without yellow fasciae.

5. White, with brown fasciae.

6. White, with bluish ditto.

7. Entirely white.

129. *Cuneata*. Linn. 108. Mart. t. vi. tab. 26. fig. 260. I cannot undertake to describe all the varieties I procured at Taranto, and shall therefore only mention the principal.

1. Those of one colour, as, wholly white, yellow, bright yellow, green, and reddish brown.

2. Those, with broad fasciae: they are of two colours, divided into three fields, or com-

partments, beginning in a point at the hinge, and widening as they approach the border, so as to form three triangles.

c. Those with narrow fasciæ. Two narrow fasciæ run from the hinge to the border, and either do not widen towards the border, but divide the shell into only three fields, frequently different from each other, and frequently alike, but always of a different colour from the fasciæ, or else they do spread out towards the border, and form five triangles upon the shell.

d. Those that are dotted. Two rows of dots go like fasciæ, from the hinge to the border, so as to form as it were three triangular fields. In these three last varieties, there reigns an indelible difference of colour.

VENUS.

130. *Verrucosa*. Linn. 116. Mart. 116. tab. 29. fig. 299. s. 286. and fig. 300. Taranto and Naples.

131. *Chione*. Linn. 115. Mart. s. vi. tab. 32. fig. 343. Common in the sea of Naples,

having

having beautiful varieties; of a rose colour, striped, and spotted.

132. *Tigerina*. Linn. 136. Mart. t. vii. tab. 37. fig. 390 and 391. Gualt. tati. 77. lit. A.

Taranto. Mine corresponds exactly with Gualtieri's figure, except that my specimen is dentated on the sides. It also agrees with Cheanitz's description, but wants the rose coloured border; so that I am as yet uncertain about it.

133. *Deflorata*. Linn. 132. Mart. t. vi. tab. 9. fig. 79. A blue and violet coloured one from Taranto, and a perfectly white one from Naples.

134. *Pensylvanica*. Linn. 138. Mart. t. vii. tab. 37. fig. 394 to 396. Taranto. Also the variety, tab. 38. fig. 399.

135. *Exoleta*. Linn. 142. Mart. t. vii. tab. 38. fig. 403 and 404. Taranto. With and without stripes: at Naples I procured one with rose-coloured stripes.

136. *Borealis*. Linn. 143. Mart. t. vii. tab. 39. fig. 413. Taranto.

137. *Coccyrica*. Mart. t. vii. tab. 37. fig. 392. Testa orbiculari alba compressa transversim striata & falcata, rima lanceolata triante, nymphis intactis, ano cordiformi. Margine integerrimo. Taranto.

138. *Scripta*. Linn. 145. Mart. t. vii. tab. 40. fig. 420 to 426. Taranto.

139. *Littorata*. Linn. 147. Mart. t. vii. tab.

41 and 42. Very frequent in the Neapolitan sea, and of an infinite variety of colours.

With the same construction of hinge and shell, there are some wholly white, and wholly yellow, and some with marks like alphabetical letters, either thickly set, or widely dispersed; sometimes they are marked with crooked lines, (*Venus geographica* Chemnitz, tab. 42. fig. 440.) sometimes embellished with spots and fasciæ, (*Venus Ala Papilionis*, fig. 144.) and sometimes covered as it were with a tissue, (*Venus textrix*, fig. 442 and 443.) I have also violet with white streaks.

140. *Decussata*. Linn. 149. Mart. t. vii. tab. 43. fig. 455 and 456. Taranto.

141. *Edulis*. Mart. t. vii. tab. 43. fig. 457 and 458. Testa ovali leviter striata, ano cordiformi, intus crocea. Taranto.

SPONDYLUS.

142. *Gæderopus*. Linn. 151. Mart. t. vii. tab. 46. fig. 472. Taranto. My specimen has long, narrow, and concave, though sometimes broad and flat spines. At Taranto they are called Sponfull, and the fish are eaten.

CHAMA.

143. *Cor*. Linn. 154. Mart. t. vii. tab. 48. fig. 483. Near Naples and Taranto, of a considerable size, as well white as brown.

144. *Antiquata*. Linn. 157. Mart. t. vii. tab. 48. fig. 488 and 489. Taranto.

145. *Calculata*. Linn. 160. Mart. t. vii. tab. 50. fig. 500 and 501. Taranto.

146. *Lazarus*. Linn. 164. Mart. t. vii. tab. 51. fig. 507 to 509. Taranto and Naples.

147. *Cryphoides*. Linn. 165. Mart. t. vii.

tab. 57. fig. 522. Taranto. I have also an oblong four cornered variety from thence.

148. *Arcinella*. Linn. 167. Mart. t. vii. tab. 54. fig. 522 and 523. Taranto.

ARCA.

149. *Noah*. Linn. 169. Mart. t. vii. tab. 53. fig. 529 to 537. This shell abounds in the Neapolitan sea.

150. *Barban*. Linn. 170. Mart. t. vii. tab. 54. fig. 535. Taranto.

151. *Reticulata*. Mart. t. vii. tab. 54. fig. 540. Testa oblonga subcompressa, patibus approxi-
matis, antice subcordata salcata lineis transver-
sis reticulata, extremitatibus verrucosa. Ta-
ranto.

The Arks of Noah are called at Taranto, *Gavatoni*, but at Naples, *Spere*. They fasten themselves to the rocks at the bottom of the sea, by means of a hard horny sort of nerve at the exterior part of the border; and as soon as they are torn from the rock with an iron rake, called

called a Branca, they lose all further power of reclosing the shell. This animal possesses also two side muscles, with which it can catch its prey, and close its shells. The purple is its most formidable enemy.

152. Pella. Linn. 172. Mart. t. vii. tab. 55. fig. 545. Taranto.

153. Scapha. Linn. 174. Mart. t. vii. tab. 56. fig. 549. Taranto; where also is found a variety with a rhomboidal hinge.

154. Undata. Linn. 179. Mart. t. vii. tab. 57. fig. 560. Taranto. It is easily distinguishable from the following varieties, that shut closer to each other.

155. Glycimeria. Linn. 181. Mart. t. vii. tab. 57. fig. 564. Taranto and Naples. There are endless varieties in the difference of colour; in general, I have found them brownish red, marbled brown and white, and striped blue and white.

156. Pileola. Linn. 182. Mart. t. vii. tab. 57. fig. 565 and 566. They are found in the Neapolitan sea, of a considerable size and weight.

weight. One of my specimens measures four inches. At Taranto they are called *Nodi di Mare*. Its inhabitant is provided with a thick, red, cartilaginous beak, that is a finger's length, and has a mouth with which it can suck, and nourish itself. It belongs to the tribe of wandering shell-fish that like the sand; and in their mode of life much resemble the pectines. The well known false cameos are made at Trapani, of this thick shell.

57. *Nucleus*. Linn. 183. Mart. t. vii. tab. 38. fig. 574. a. and b. Taranto.

OSTREA.

58. *Maxima*. Linn. 185. Mart. t. vii. tab. 60. fig. 585. This very common shell is called by the fishermen at Taranto, *Concha di San Dialogo*, but in other places, *Cappa di San Giacomo*. Its inhabitant belongs to the tribe of wandering shell-fish. Whether it moves, or lies still, the convex side of its shell is always turned towards the ground, by which means, it is most used. The black ligament which it has

has in lieu of a hinge, serves to move the upper shell; but the animal would not be able to close the shells so fast with it, if it had not a main muscle; by means whereof, and of the ribs and furrows that exactly fit each other, it presses the shells so close together, that not only the smallest animal it may have taken cannot escape, but even the ravenous *purpura* can no longer open it: it is nevertheless the frequent prey of that tyger among the shell-fish. As it can shut itself upon the least motion, it endeavours to keep its shell as open possible, so as generally to form an angle of 55 degrees, when it hangs out a reddish purple cartilaginous skin that plays about in the water, for the purpose of catching small fish, and particularly shrimps and crabs, which it instantly draws into its shell, and devours its prey, and then re-opens itself. In the meanwhile, the *purpura* secretly approaches, and having thrown back its horny sort of cover towards the lips, draws its tongue (which it makes use of also for sucking, and sticking into sea-weed, and other things)

things), into its hard and pointed beak, which it endeavours to force into the opening shell, and frequently succeeds: when with its tongue it entirely destroys the inhabitant. Besides the organs of contact and separation, the inhabitant of the pecten, or scallop, has on the right side of the hinge, and upon the convex part of the body, which enters into the furrows of the shell, several round, brown, and glossy orbs, that may be deemed eyes, with which it watches its prey. This was probably observed both by Aristotle and Pliny, the former of whom says in his Hist. Anim. lib. v. cap. viii. p. 485. *"Siquis digitos adversus hiantes eos moveat, pectines contrahuntur ut videntes."* Father Minasi remarked the same thing in these animals, when he examined them in a pail full of sea-water. Two black dots, that may be deemed eyes, have been also observed in the purpura, above the mouth of that animal; and it was attempted with the utmost care, and without much disturbance of the water, to glide a red against them; but when it was four inches from

from them, the animal withdrew into its shell with the utmost diligence. I hope that the experiments of M. Poli will furnish us with conclusive explanations upon this subject.

The inhabitant of the scallop is taken at pleasure, but is in highest condition and season at the close of spring and autumn. Throughout the summer it is black. At Taranto it is esteemed a delicacy; and it is certain that it is there so large and fat, that Horace might with reason say, "*Pectinibus patulis jactat se molle Talentum.*" But whether Pliny, and the commentator upon Delicis Tarantinae, be right in declaring that the pectish is of diuretic quality, *Purgatur vesica e pectinibus cibo*, I leave to the decision of the faculty. Its most formidable enemy is the *Urdia maris errans*, described by Rondeletius, lib. xvii. p. 19 and 20. It kills this shell-fish with a caustic gelatinous liquor, which it pours at night upon the skin that hangs out.

139. *Jacobaea*. Linn. 136. Mart. t. 41. 138. 6p. 65. 138 and 9. Taranto and Naples.

160. *Varia*. Linn. 199. Mart. t. vii. tab. 53. fig. 633 and 634. I possess several varieties of this shell, with the most beautiful mixture of colours. They are common in the Mediterranean, and of a considerable size.
161. *Pusio*. Linn. 200. Mart. t. vii. tab. 67. fig. 635 and 636. Taranto. Various in colour.
162. *Glabra*. Linn. 201. Mart. t. vii. tab. 67. fig. 641 to 643. Naples and Taranto. Very different in the colour and the number of the stripes; also wholly without side stripes, exactly as described by Linnæus.
163. *Opercularia*. Linn. 202. Mart. t. vii. tab. 67. fig. 646. Taranto.
164. *Fasciata*. Linn. 205. Mart. t. vii. tab. 68. fig. 649, a. Gualt. tab. 33. lit. rr. The Linnæan description will not correspond with any of my irregular pestines; but they are very accurately delineated and described in Chemnitz and Gualtieri. Taranto.
165. *Lima*. Linn. 206. Mart. t. vii. tab. 68. fig. 651. Taranto, where they are called *Femmine di Mare*, and are found near the *edilse velvet*

velvet muscle, at the depth of three or four fathoms of water.

166. *Glaciata*. Mart. t. vii. tab. 68. fig. 653.

Testa equivalvi fragili pellucida, auriculis inæqualibus, una reflexa, incrassata. Stilis numerosissimis minutis interruptis, tota alba. Taranto.

167. *Bullata*. Bornik. Testa ovata oblonga

tumida, valvæ æquales, sulcis triginta duobus longitudinalibus, umbones attenuati, in apice breves inturves; cardo transversus rectus intrusum delieris, lacuna media ista; auriculæ acutæ æquales. Color albus. Taranto. The shell now before me does not wholly correspond either with M. de Born's description, or with the figure in Martini, t. vii. tab. 68. fig. 649. b;

and yet I know not where to class it better than here. It has far more striae, which, as upon the *glaciata*, are frequently broken; but the shell is thicker, and without any asperities. One ear is thick, and bent backwards, as in the large limpa of Chemnitz; but the other

attributes

intolutes agree very well, except that the shells are not very remarkably concave.

363. *Folium*. Linn. 309. Mart. t. viii. tab. 74. fig. 662 to 666. Tarento.

364. *Edulia*. Linn. 311. Mart. t. viii. tab. 74. fig. 662. Amongst the excellent fish which

the Tarentine sea affords to a delicate palate, one of the first-ports belongs to the oyster, which no where arrives at such perfection. In the time of the Romans they were indeed in no great repute, and the oysters of Brundisium, which were fattened in the Lucrine lake, were alone permitted to appear at the tables of the opulent; but they are now forgotten, and the oysters of Taranto are preferred to those of Colchester, even by the most partial Englishman. This accounts for the tolerably good management of the oyster fishery in the Mare Piccolo. As the oysters are fond of fresh water springs, and a rocky tufa bottom, oyster-beds are formed in such situations, of which there are seven, distinguishable, to the fishermen

men only, by certain marks upon the shore. Whoever pays the annual sum of thirty carlini (11s. 3d.), either to the king, or the owner of the spot, may dredge for oysters from St. Andrew's-Day until Easter; but such as presume to dredge in any other season, are punished by a fine of six ducats (£ 1. 2s. 6d.) for every forty oysters. An hundred oysters are sold on the spot for five carlini (1s. 10d. $\frac{1}{2}$). The fishermen are very careful not to hurt the spat, or brood; and when the water is rough, they throw oil upon it to smooth it, in order that they may know where the brood lies; but if any young oysters should happen to be drawn up by the iron rake, they are carefully deposited in a proper place. The fishermen at Taranto unanimously declare that oysters, as well as sea fish in general, are fattest during the full moon; and Horace tell us that

*Labrica mellea implent conchyliana.*¹

They are likewise so fully persuaded that the beams of the moon have a pernicious effect

K k

upon

upon sea fish, that they cover the fish taken in moon-light, lest they should speedily putrify. Lobsters and crabs, as well as other fish, are said also to be unwholesome and tasteless, when exposed to the beams of the moon.

ANOMIA.

170. *Ephippium*. Linn. 218. Mart. t. viii. tab. 76. fig. 691 and 692. Taranto.

MYTILUS.

171. *Lytophagus*. Linn. 248. Mart. t. viii. tab. 82. fig. 729 and 730. Naples and Taranto. In the ditch that separates the castle of Taranto from the Mare Piccolo, and unites the inner with the outer sea, are considerable rocks of calcareous tufa, full of these shells, there called *Dattili*. The water where these rocks are to be found, and which are twelve feet distant from the shore, is only two palms deep. The animal frequently digs a foot deep into the rock, and that, when it is small; for the shells of the full-grown cannot be taken out without breaking.

These

These rocks are often quite hard throughout, but are frequently only hard upon the surface, and quite soft within. Some people at Taranto call these shell-fish *Imbrici*, and pretend that they are the same with those known at Venice by the name of *Pidochii dell' Arsenale*; but this I cannot with any certainty affirm. Although these *dattili* are eaten, they are but little esteemed, on account of the abundance of other excellent shell-fish. The fishermen place the animal in the sun; and with it, besmear their hands and faces at night, so as to illuminate them, as with phosphorus.

172. *Barbatus*. Linn. 252. Mart. t. viii. tab. 84. fig. 749. Taranto. This is the *cozza* *pelosa* of the Tarentines, and the most delicate of fish. It distinguishes itself from the following edible muscle in nothing but the beard, which hangs down from the edge. The flesh also is rather whiter; but towards winter becomes red and bitter. The shell is sometimes three inches and an half long.

173. *Edulis*. Linn. 253. Mart. t. viii. tab.

84. fig. 750 and 751. This velvet-muscle, known throughout the Mediterranean by the name of the *Cozza Nera*, and universally esteemed for its delicacy, is, with the above, to which it is nearly allied, a source of wealth to the city of Taranto. Ten thousand cantara of them are said to be annually disposed of: and the greater part of the 40,000 ducats— (£7500.)—which the *Mare Piccolo* yearly brings in, is raised by the sale of these two sorts of shell-fish. The inhabitants of Taranto have consequently taken great pains, for a long series of years, to keep this branch of commerce in a flourishing state; and neglect nothing to propagate the shell-fish in abundance. They fish for them from Easter to Christmas in the *Mare Grande*, and transplant them into the *Mare Piccolo*, where they, as well as most other shell-fish, acquire a greater degree of flavour, which is owing both to that lake being less exposed to storms, and to the various fresh water springs that arise there. The muscles being collected in the great sea, are first strowed along

along that part of the shore upon which stands the town; when poles twenty palms long are driven in a row into the ground, where the sea is about twelve palms deep; and are bound together with rufacs. The muscles fasten themselves to these poles, and breed; and at the end of a year, the poles are pulled up, the muscles taken off, and the largest fold; but the smallest are scattered at the entrance of the great sea at high water, by which they are carried into the Mare Piccolo, where they spread and grow. They also fasten themselves to stones and marine productions, but generally deposit their spawn in the sand, where the water is not too deep. But the fishermen usually employ the following method, in order to be able annually to sell a certain quantity of these muscles, and at the same time not impede their propagation. They carefully watch the spots where the muscles deposit their spawn; at the close of the year, and in November they put down poles in the neighbourhood of those places. The first brood attaches itself to the

poles at the end of December; the second at the end of February; and the third at the end of March. In June, the poles to which the first brood is attached are drawn up, and the shells are taken off, and placed in such spots of the Mare Piccolo as are destined to that use. At the end of six other months they are fished up with an iron rake, divided, and placed in other beds; nor do they arrive at perfection before the end of a year and an half. This is also the process with the second and third broods, which come to maturity in like proportion of time. For this purpose they are frequently taken out, in order that they may be thinned, and have food enough to make them perfectly fat. As they become very meagre after depositing their spawn, they are taken up, and disposed of before that takes place. When the south-east wind blows with great violence, these shell-fish suffer considerably, and become black and meagre. When the Mare Piccolo is swola by heavy torrents of rain, and earth and other materials are carried into it, these
muscles

muscles receive great detriment. A sort of *Serpula* likewise frequently draws itself over their shells, so that they can no longer open them to take in nourishment, and must consequently perish. The muscles that fasten themselves to the city walls, and are therefore called *Cozze di Pariete*, always arrive at a particular size and degree of fatness; neither are they exposed to the above calamities, and are collected in the summer. These animals, when very small, are used at Naples as baits for catching fish.

It may be proper here to remark, that the fishery of the *Mare Piccolo* is regulated by laws extant in a book, called "*Il Libro Rosso*," which is entrusted to the care of the chief officer of the customs. It contains not only the months and seasons when the fish and shell-fish may be taken, and what nets may be used for the different purposes, but also the reasons why it is prohibited to pursue either sort at particular seasons. The different kinds of nets, and

the mode of catching each inhabitant of the sea, are also described.

The fishery of the Mare Piccolo belongs in part to the king, who farms it out, together with the castle ditch, which wholly belongs to him, for 6000 ducats—(£1135)—a year. The beds of Cozze belong to various persons, who are obliged to deliver to the royal farmer a fifth part of what they sell. Common shell-fish may however be taken by any one who asks permission of the farmer.

I had nearly omitted remarking, that it appears to me very singular that the Romans, who were otherwise so luxuriant in eating, should have set but little value upon the velvet-muscles, and that Taranto should have been famed neither for them nor oysters. A passage in Horace, sat. iv. lib. 2. ver. 37, almost induces me to think that this kind of muscle was used medicinally;

Si dura morabitur alvus,

Mitius ac vilis pellens obstaculo coctus.

but

but who can say that the mitulus of Horace is the same as our velvet-muscle?

174. *Ungulatus*. Linn. 254. Mart. t. viii. tab. 85. fig. 756. Taranto.

175. *Modiolus*. Linn. 256. Mart. t. viii. tab. 85. fig. 757. Taranto.

176. *Hirundo*. Linn. 262. Mart. t. viii. tab. 85. fig. 752. Taranto and Naples.

177. *Salen*. Testa lineari, recta attenuata, compressa, lateribus oblique striata. Tota testacea prope cardium lutea. Cardo lateralis edentulus, linea longitudinali subulata oblique excavata. Taranto. As I do not know where to class this shell, I have given it in pl. IX. fig. 15; in order that more experienced conchologists may determine its proper place.

PINNA.

178. *Vitrea*. Mart. t. viii. tab. 87. fig. 772. Testa triangulari, fragilissima, candida, striis longitudinalibus undulatis ad marginem muricata. Naples.

179. *Nobilis*. Linn. 265. Mart. t. viii. tab.

89. Although every part of the Neapolitan sea produces this shell-fish in great abundance, and of an extraordinary size, the Tarentines alone reap any advantage from it, and even collect it upon the coasts of Sardinia and Corsica; but the tuft of silk, for which they are sought and collected, is not equally good in all places. Where the bottom of the sea is sandy, the shell and its tuft, which takes root in the sand, may easily be drawn out; and when washed, the tuft is of a glossy gold colour. In rusty and muddy bottoms the shell and tuft not only stick so fast as to be generally broken when drawn up, but the colour of the silk is black, and without gloss. The shell is always in an upright position, open, and half a palm deep in the ground. Many fishermen assured me that they have frequently taken notice of the shrimp, which is constantly in the neighbourhood of the pinna, but does not keep within it, and is known by the name of the pinna's centinel. When an enemy of the muscle, especially the *sepiis octopoda*, here called polypo,

polypo, is in the neighbourhood, the shrimp makes a motion in the water; upon which the pinna shuts its sharp shells so close and forcibly, that if a finger were in the way, it would risk being cut off. They also assured me that the sepia sometimes takes a stone, and lets it fall into the open shell, so as to prevent its shutting; but that when that trick fails, it endeavours forcibly to tear the shell from the bottom, and break it to pieces. Chemnitz, whose opinion is doubtless of great weight, has indeed treated all this as a ridiculous fable, in the tenth part of his "Natural Historian," and in his admirable continuation of Martini's Cabinet of Shells; but so many respectable old fishermen, who have passed their lives upon the sea, have so earnestly assured me of the contrary, that the truth is still in my mind undecided.

This muscle is fished up with an iron, called peronico, and the operation is thus performed. The instrument consists of two semicircular bars of iron ^a, fastened together at each end, but three

APPENDIX.

three inches distant from each other in the centre. From one end to the other, the diameter is nine inches, and the cavity, or half diameter, is from four to five inches. At one end is a hollow handle—*b*, in which a pole, of the length required, may be fastened at pleasure; but at the other end is a ring—*c*—to which a cord—*d*—is made fast. See pl. X. fig. 16 and 17. As soon as a pinna is discovered, the iron is slowly let down to the ground over the shell, which is then twisted round, and drawn out. When the fisherman has got a sufficient number of them, the shell is opened, and the silk, called at Turanto *lana penna*, is

Fig. 16

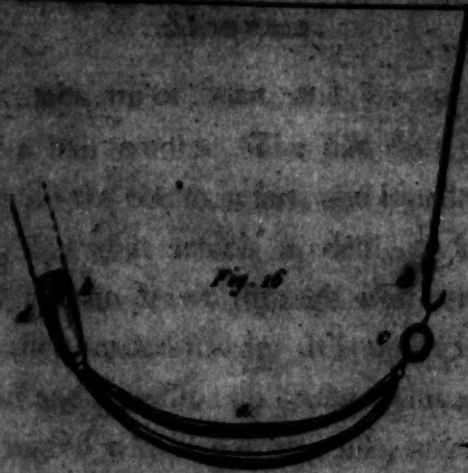


Fig. 16

Fig. 17



dry place. When it is yet moist, it is
rubbed and separated with the hand, and again
spread upon the table to dry; and when thus
roughly dry, it is drawn through a wide comb,
and afterwards through a narrow one. Both

ends

these

London: Published by J. Smith, 1785.

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these combs are of bone, and, except in size, are like hair combs. The silk thus combed belongs to the common sort, and is called *extra dente*; but that which is destined for finer works is again drawn through iron combs, or cards, there called *scarde*. It is then spun with a distaff and spindle, two or three threads of it being mixed with one of real silk; after which they knit not only gloves, stockings, and waist-coats, but even whole garments of it. When the piece is finished, it is washed in clean water, mixed with lemon juice; after which it is gently beaten between the hands, and finally smoothed with a warm iron. The most beautiful are of a brown cinnamon and glossy gold colour, producing a very rich and pleasing effect. As every thing made of this sort of silk is very subject to be moth-eaten, care must be taken to keep it from all eatables and sweet-meats, and to wrap it in clean linen. A pair of women's gloves costs upon the spot sixteen carlini—(six shillings)—and a pair of stockings costs from three to four ducats—(from 11s. 3d.

to 1754) — and so in proportion; but the sale of this manufacture is not very extensive. For my part I greatly doubt if the habits of the ancients were made of this sort of silk; it may indeed be true, as is supposed by the commentator upon the *Deliciae Tarantinae*, that the glossy light garments worn by the dancing women, as they are represented in the paintings at the Museum at Portici, and which were called *Tarentinæ*, were made of this silk.

The pinner is found most abundantly at Cape San Vito, to the east of Taranto, and the fishermen often bring from thence not only silk but beautiful pearls, and very useful mother of pearl.

IV. MULTI-

IV.

MULTIVALVES.

LEPAS.

180. *BALANUS*. Linn. 10. Mart. t. viii.
tab. 97. fig. 820. Taranto.

181. *Balanoides*. Linn. 11. Mart. t. viii.
tab. 97. fig. 821 to 825. Taranto.

182. *Tintinabulum*. Linn. 11. Mart. t. viii.
tab. 97. fig. 828 to 831. Taranto. My spec-
imen is small, with violet and white striped
shells, and very glossy grey interstices. It is
extremely like fig. 842. tab. 99.

183. *Testudinaria*. Linn. 14. Mart. t. viii.
tab. 99. fig. 847 to 848. Taranto.

184. *Anatifera*. Linn. 18. Mart. t. viii. tab.
100. fig. 853 to 855. The white from Naples,
and the blue from Taranto.

PHOLAS.

PHOLAS.

185. *Dactylus*. Linn. 20. Mart. t. viii. tab.
101. fig. 359. Naples and Taranto.

Such were the varieties of shells that I was able to collect during my two years' residence in the kingdom of Naples. I am persuaded that many more are to be found there, and that a treasure of knowledge in the natural history of sea animals might be there collected. I should gladly have gathered information, or made remarks upon the oecconomy of other marine animals; but that having exceeded my ability, I shall content myself with observing, that Taranto abounds with various kinds of sea hedge-hogs, there called Rizzi, which are all fit for the table, and are best and fullest of spawn during the increase of the moon. At Naples, those taken near the island of Nisida, are the most esteemed. The ink-fish—*sepia officinalis*, or more generally *lolligo*, abounds also

Fig. 1



Fig. 2



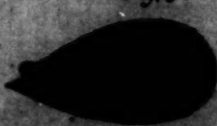
Fig. 3



Fig. 4



Fig. 5



London, Published Nov. 1784, by Cadell & Davies, Strand.

Printed by J. Smith.



Fig. 4



Fig. 5



Fig. 6





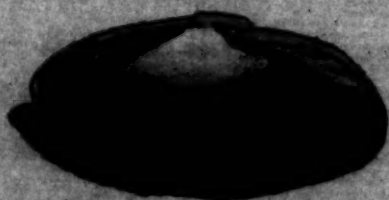




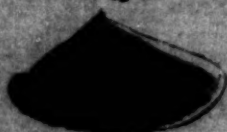
Fig. 12 a



Fig. 12 b



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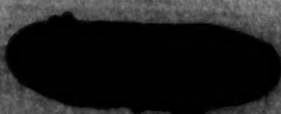
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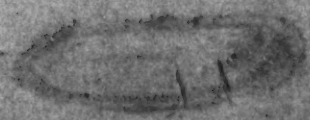
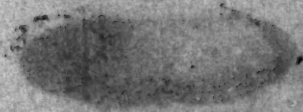
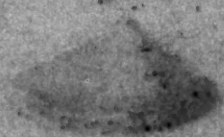
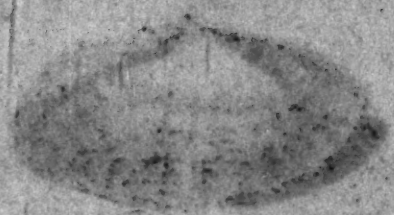
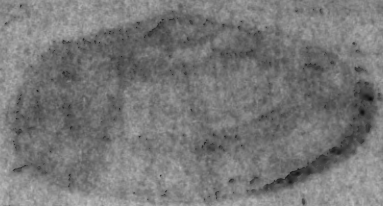


15 b



15 a





also in the Neapolitan sea, under the name of calamare and seccia. In order to catch them, they must be watched in the pairing season, when the female must first be taken; for the male never quits her, whereas she always escapes when the male is caught first. They are generally taken at the close of October and throughout November, at the dawn of day, and in the dusk of the evening. Their spawn is white.

The great Bay of Taranto abounds with white, black, and red coral; but only the last sort is esteemed, gathered, and sold. Much might be said about the coral fishery at Naples, but I have not yet been able to collect sufficient information about it.

also in the Mediterranean, under the name of
calamint and leopord. In order to catch them,
they must first be taken: for the
when the female must first be taken: for the
male must first be taken: for the

TREATISE **THREAD of the ZABBARA, or ALOE.** **PLANT.**

*Written by command of the King of NAPLES,
and presented to the Government, in 1777, by
the Count de BONA, a Polish Gentleman, V. P.
in which this Paper is referred to in my
official Note A.*

THE plant which we call aloe, and which
grows in great abundance in Persia,
under the name of zabar, is commonly termed
zabbara in Sicily and Spain, where, as well as
in India and the American Islands, it is found
in great plenty. The southern coasts of Italy
also furnish a very considerable number; but
it is not equally flourishing every where, neither

does the stem always attain the height of which it is susceptible, and which some travellers declare to arrive at thirty-four feet—(pieds de roi)—; and indeed I saw some near Girgenti, in Sicily, whose stems were upwards of twenty-eight feet high.

As the figure of this plant is too well known to need any description, I shall content myself with noting its varieties, and its use in medicine; after which I shall enter into a detail relative as well to the extraction of the thread, as to the articles of commerce, in which it is and might be employed by prudent regulations, and a well understood spirit of economy and order.

Most of the botanists, predecessors of Linnaeus, were so attached to the more striking varieties of plants, that they classed them according to their exterior characteristic differences, and reckoned five species of the silene-plant; but the celebrated botanist of Sweden, more exact in his observations, has

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enumerated eight species, under the titles of *aloes perfoliata*, *variegata*, *disticha*, *spiralis*, *retusa*, *viscosa*, *pumila*, and *varia*, amongst which he likewise notices the necessary subdivisions. But this analysis not being the immediate object of attention, I shall proceed to observe, that none but the *aloes perfoliata* and *viscosa* are used in furnishing the thread; the fibres of the others being too tender for that purpose; but the *agave Americana* affords a much better sort of thread.

The juice of the aloe-plant was employed in ancient much more than in modern pharmacy, in chronic and obstinate disorders, especially those of the hypochondriac cast, acidities of the stomach, worms, obstructions of the bowels, and other disorders arising therefrom; provided the patients were not subject to spitting of blood, or to any hæmorrhoidal flux, whether internal or external, and particularly to that of the inward carotid, where the ligature being impossible, the violent motion occa-

sioned

signed in the Blood by the juice of the aloe, rendered useless the application of every salutary styptic, and destroyed its effect.

Pomet, in his History of Drugs, mentions three sorts of aloe; the socotoripe, so called either from its coming to us in a concrete form, or more probably because the greatest quantity comes from the Isle of Socotra, in the Red Sea. According to Chomel, this is the purest sort, and is of a yellow colour, bordering upon red, shining, friable in winter, but easily softened in summer, and its smell resembles that of myrrh. The second is the hepatic aloe, which takes its name from its being of a liver colour; and the third is the caballine aloe, and is used only in remedies for horses. It is the mark or rape of the two other sorts, is of a black colour, and full of dirt.

The aloe forms also an ingredient in the *hieradiscolocynthados*, in the Catholic extract of Frankfort, and Sennert, in the cachectic pills of Charas, in those of Ambra of the London Pharmacopœia, and in the pestilential, or

serid pills; and according to the same author, the aloe gives name to the dialoe, or *hierapicra* of Galen, is an ingredient in the elixir proprietatis of Paracelsus, in the balm of the Commander, and in many other vulnerary and deterfive compositions, as extremely well adapted to the resistance of putrefactions.

Sicily furnishes every species of aloe, and especially the *perfoliata* and *viscosa*, in great abundance. As the same kinds grow also in Spain, the phlegmatic inhabitants of that kingdom first thought of procuring from them a thread, whose extraction requires all the patience and sang-froid which seem to be the peculiar characteristics of that nation. The Spanish soldiers who were sent to Sicily when that island was subject to the crown of Spain, and who remained there attached to the service of the king of the Two Sicilies, brought with them the art of making the thread, and are the only persons in the island employed in its manufacture.

After stripping the plant of all the green leaves

leaves that compose its first coat, they cut off all those which cover the stem, and which are generally white, smooth, tender, and less compact than the exterior ones. This operation is performed from May till the end of August, when the leaves become too hard and brittle. After cutting off the leaves, they fasten one end of them to a cord, at the distance of two or three inches from each other, and stretching the cord upon the brink of a running water, suffer the leaves to soak during eight or ten days, according to the greater or less degree of heat, and the greater or less hardness of the leaves. After they have been sufficiently soaked, they are placed upon a flat stone, and beaten with another stone, cut into a half circumference, until the skin and the parenchyma are bruised, and the alimentary juice forced out of the first fibres, which are always coarser and larger than the rest. In this state the leaves are placed singly upon a table, their larger end remaining loose, but the other being fastened to the table with a nail; when the leaves

are scraped with a blunt and smooth iron, shaped like the sides of a bayonet, of which weapon the soldiers generally make use, from an unwillingness to purchase an iron instrument merely for that purpose. After the leaves have been scraped about twenty or thirty times, the transverse and unequal fibres are broken off, and thrown away, and the table is covered with a greenish juice, exhaling alkaline particles of so caustic a quality, that the hands of the soldiers are usually rendered quite raw, and their eyes exceedingly inflamed. But as cold water is the only remedy they employ, I am inclined to think that the styptic quality of this plant is of the same nature as that of the leaves of the *eleminatis*, better known by the name of the beggar's herb, because it is employed by vagabonds and beggars in making supposed inflammations and ulcers, in order to excite our commiseration, and of which they can quickly cure themselves by the use of cold water.

As this first operation of scraping only forwards the work by the removal of the coarser fibres, those

those of which the thread is to be made, are as yet scarcely to be perceived; but after the leaf has been turned, with the point remaining loose, and the larger end fastened to the table, and after it has again undergone the operation of scraping, the fibres, freed from every extraneous body, display themselves in full force, and form as many filaments, of a yellow colour, like that of raw silk, not of the orange kind, but of that which comes from off the white cocoons. To deprive the thread of that colour, and preserve it from the corruption which might take place if it were left covered with the juice of the plant; it is soaked during three days in a tub of cold water, after which it is washed and beaten in a running stream, by which means the thread becomes softer and richer, without losing any thing of its consistence.

Each leaf affords a compleat skain, more or less thick, according to the size of the leaf. Fifteen or twenty of these skains are tied to a cord, and hung up in a garret, or other airy place,

place, where there is a constant shade; for if the sun were to shine upon the thread in that state, it would immediately turn it yellow, and give it a stiffness which it would be afterwards impossible to remedy.

When properly made and dried, this thread is much used in Sicily, and still more in Spain, where manufactories have been established, particularly in Catalonia, in which the thread is employed not only in making harness for horses in the tournaments, nets of various kinds, women's neck handkerchiefs, night-caps, ruffles de gros-botte, men's ruffles, and caps of ease, but as the thread will take any colour, they also use it in making a variety of stuffs, and especially handkerchiefs, which they sell as for India handkerchiefs made of the bark of trees; but as the thread can never be of greater length than the leaf, it is only employed in the web; the rest of the work being done with silk. These stuffs have however a very evident defect in the visible difference between the softness and richness of the silk, and the coarse

equal quality of the thread, which renders them by no means lasting; for after a certain time, the silk is worn out by the mere friction of the harder body. The tint of the silk also is different, and presents to the touch a soft and smooth surface, whilst the thread takes its colour almost in the same manner as the Russia leather; that is to say, that the epidermis of its exterior surface alone imbibes it, whilst the body of the thread remains unaffected.

It is now some years since a proposal relative to the thread of the silk plant was made to the merchants at Palermo by a Frenchman, of the name of Goussin, born at Hanover, and descended from one of those refugee families who, after the revocation of the edict of Nantes, enriched other countries with arts before familiar to the French alone. This person, uniting a knowledge of the mechanical arts to that of the fabrication of silks, velvets, and tulle, proposed to make a machine which by the help of water should divide each thread into two parts,

parts, and thus produce the double advantage of rendering the thread finer and more supple; and of offering to the manufacturer a smoother surface, extremely suitable to several articles of a peculiar kind; but as he required a considerable reward for his ingenuity, his invention was not deemed sufficiently useful to merit so high a premium, and he was suffered to leave the country; of which the merchants have since repented.

I think that it would not be difficult to give this thread a more penetrating dye, by following either the method of M. Hellet, or those practised at Lyons, Florence, Paris, or Genoa. The arts in Sicily have indeed by no means attained the desirable degree of maturity; and it is with the art of dying as with the rest; there being some theoretical knowledge, but no practice, for want of established principles, good will, and due encouragement. The black of Messina and Palermo begins however to acquire a certain confidence, which gives it all the lustre of that of Genoa for the velvets; but

it

it has not yet gained its solidity, and turns red as quickly as that of other European countries.

Notwithstanding all these defects, I consider the aloe thread as an useful article, which, in process of time, might form a lucrative and necessary branch of commerce, and in years when the silk-worms should happen to fail, might furnish employment to many manufacturers, and produce a quantity of neutral stuffs (if I may so call them), which being neither silk, thread, nor wool, might afford habiliments, either from choice or fashion, to the great and opulent, and might be very useful to those of inferior fortune, on account of the low price which might be put upon them.

This object has not escaped the patriotic views of the new minister, the Marquis della Sambuca, whose zeal for the glory of his master and his country leads him to analyse every thing that presents a prospect of real advantage and utility. Some necessary perquisitions have been made by his order, and as the aloe grows abundantly

stantly in Sicily, and is extremely prolific, and consequently very easily multiplied, that plant may be considered as an inexhaustible fund, and of a product doubly beneficial, inasmuch as it would usefully employ a number of idle wretches, who either infect the island, or uselessly people the prisons, and would considerably augment the royal revenue, by causing a circulation of cash in the interior of the country.

There being nothing at present fixed relative to the aloe-thread, the rotolo (equal to a pound and three quarters, French measure) is sold for eight carlini—(three shillings). But if the minister should form a permanent establishment, I am persuaded that it would not cost the king more than half that price, and that the manufacturers would still be gainers; since the idlest workman might easily make two rotoli a day, whilst the more industrious would make three, and even three and an half in the longest days. But I think it would be necessary to forbid the use of the bayonet in the operation of scraping;

for

for the styptic quality of the juice not only cuts into that weapon in the course of time, but the ferruginous particles of it blacken the thread, or at least form blueish spots, extremely difficult to eradicate. It would be more advisable to employ scrapers of wood, stone, or any hard body, such as glass, or any other vitrified substance, except metal, and especially iron and steel.

P I N I S.

